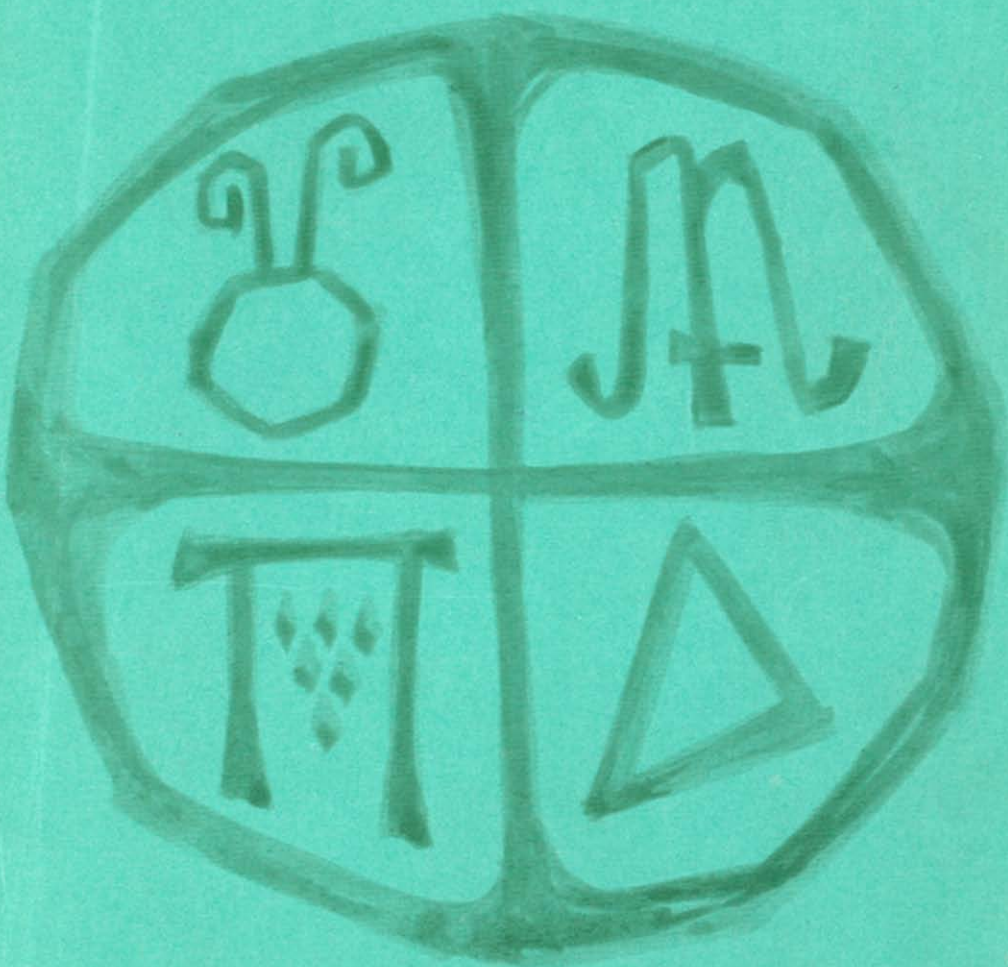


STOUT STATE UNIVERSITY
MENOMONIE, WISCONSIN 1964-1966
REGULAR SESSION BULLETIN



STOUT STATE COLLEGE

Undergraduate Bulletin

REGULAR SESSIONS - 1964 - 1966

THE SCHOOL OF HOME ECONOMICS

THE SCHOOL OF APPLIED SCIENCE AND TECHNOLOGY



LIII Number I

Issued quarterly to students of Stout State College. Additional copies may be obtained at the offices of administration at Stout State College, 120 Second Street, Menomonie, Wisconsin. Entered as second class matter March 10, 1927, at the Post Office at Menomonie, Wisconsin, under the act of August 24, 1912.



Printed by students on the presses of

STOUT STATE COLLEGE

Located in Menomonie, Wisconsin, U.S.A.

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ACCREDITATION

The undergraduate and graduate programs of Stout State College are fully accredited by the North Central Association of Colleges and Secondary Schools and National Council for Accreditation of Teacher Education. Membership is also maintained in the National Commission of Accrediting, the American Association of Colleges for Teacher Education, the American Council on Education, and the Midwest Conference on Graduate Study and Research.



Women graduates of Stout State College are eligible for membership in the American Association of University Women.

DIRECTORY FOR CORRESPONDENCE

Administration, policy	The President
Admissions, evaluation of credits, registration	The Registrar
Alumni affairs	The Alumni Secretary
Business affairs and arrangements	The Business Manager
Counseling services for prospective students	The Dean of Student Affairs
Employment, student part-time	The Dean of Men
Graduate program	The Dean of Graduate Studies
Housing for women students	The Dean of Women
Housing for men and married students	The Dean of Men
Instruction	The Dean of the School of Home Economics
Instruction	The Dean of the School of Applied Science and Technology
Literature, catalog and general announcements	The Dean of Student Affairs
Placement	The Placement Chairman
Program planning, evaluation of transferred credits	The Registrar
Schedule of Classes	The Dean of the School of Home Economics
Schedule of Classes	The Dean of the School of Applied Science and Technology
Scholarships	The Dean of Student Affairs
Transcripts	The Registrar

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COLLEGE CALENDAR

SUMMER SESSION 1964

Monday, June 15	Summer Session Begins
Friday, July 10	End of First Four Weeks
Monday, July 13	Beginning of Second Four weeks
Friday, July 24	End of First Six Weeks
Friday, August 7	Summer Session Closes

REGULAR SESSION 1964-65

Monday, September 7	Labor Day
Tuesday, September 8	Admission and Orientation for Freshman Students, Registration for Men Students Transferring from other Colleges and Graduate Students, Women Transfer Students Register as Classified
Wednesday, September 9	Registration for Sophomores, Juniors, and Seniors
Thursday, September 10	Registration for Freshman Students
Friday, September 11	Classes Convene
Friday, November 6	Midsemester, End of First Nine Weeks
Tuesday, November 24	Thanksgiving Vacation begins at 5:30 p.m.
Monday, November 30	Classes Resume
Friday, December 18	Christmas Vacation begins at 5:30 p.m.
Monday, January 4, 1965	Classes Resume
Tuesday, January 19	Final Examinations
Wednesday, January 20	Final Examinations
Thursday, January 21	Final Examinations
Friday, January 22	First Semester Ends
Monday, January 25, and	
Tuesday, January 26	Registration for Second Semester
Wednesday, January 27	Classes Convene
Friday, March 26	Midsemester, End of Third Nine Weeks
Friday, April 16	Spring Vacation Begins at Noon
Monday, April 26	Classes Resume
Tuesday, June 1	Final Examinations
Wednesday, June 2	Final Examinations
Thursday, June 3	Final Examinations
Friday, June 4	End of College Year
Saturday, June 5	Commencement

SUMMER SESSION 1965

Monday, June 21	Summer Session Begins
Friday, July 16	End of First Four Weeks
Monday, July 19	Beginning of Second Four Weeks
Friday, July 30	End of First Six Weeks
Friday, August 13	End of Summer Session

1966

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REGULAR SESSION 1965-66

Monday, September 6	Labor Day
Tuesday, September 7	Admission and Orientation for Freshman Students, Registration for Men Students Transferring from other Colleges and Graduate Students, Women Transfer Students Register as Classified
Wednesday, September 8	Registration for Sophomores, Juniors, and Seniors
Thursday, September 9	Registration for Freshman Students
Friday, September 10	Classes Convene
Friday, November 5	Midsemester, End of First Nine Weeks
Tuesday, November 23	Thanksgiving Vacation begins at 5:30 p.m.
Monday, November 29	Classes Resume
Friday, December 17	Christmas Vacation begins at 5:30 p.m.
Monday, January 3, 1966	Classes Resume
Tuesday, January 18	Final Examinations
Wednesday, January 19	Final Examinations
Thursday, January 20	Final Examinations
Friday, January 21	First Semester Ends
Monday, January 24, and Tuesday, January 25	Registration for Second Semester
Wednesday, January 26	Classes Convene
Friday, March 25	Midsemester, End of Third Nine Weeks
Friday, April 8	Spring Vacation Begins at Noon
Monday, April 18	Classes Resume
Tuesday, May 31	Final Examinations
Wednesday, June 1	Final Examinations
Thursday, June 2	Final Examinations
Friday, June 3	End of College Year
Saturday, June 4	Commencement

SUMMER SESSION 1966

Monday, June 20	Summer Session Begins
Friday, July 15	End of First Four Weeks
Monday, July 18	Beginning of Second Four Weeks
Friday, July 29	End of First Six Weeks
Friday, August 12	End of Summer Session

BOARD OF REGENTS WISCONSIN STATE COLLEGES

(as of January 1964)

	Term Expires
David Rodli, Baldwin, President	1964
John C. Thomson, Stevens Point, Vice President	1965
Donald E. Bonk, Chilton	1966
Charles F. Dahl, Viroqua	1967
Elizabeth Hawkes, Washburn	1966
John K. Kyle, Madison	1965
Mrs. Gordon R. McIntyre, Appleton	1964
William D. McIntyre, Eau Claire	1963
Richard S. McKnight, South Wayne	1965
Eugene W. Murphy, La Crosse	1968
Donald L. Soucie, Milwaukee	1967
Mrs. Aleck E. Tilseth, Menomonie	1965
Eugene R. McPhee, Madison, Secretary and Director of Colleges	
Angus B. Rothwell, Madison, State Superintendent of Public Instruction (ex-officio)	

STATE COORDINATING COMMITTEE FOR HIGHER EDUCATION

Walter Burke	Hales Corners
Meyer M. Cohen	Green Bay
Arthur DeBardleben	Park Falls
E. J. Fransway	Milwaukee
Jacob F. Friedrich	Milwaukee
Martin Gunnulson	Cambridge
Elizabeth Hawkes	Washburn
John K. Kyle	Madison
Maurice B. Pasch	Madison
John Race	Fond du Lac
John D. Rice	Sparta
John Roche	Rio
Leo S. Rodems	Baraboo
David Rodli	Baldwin
Angus B. Rothwell	Madison
Duane Smith	Wisconsin Rapids
Carl E. Steiger	Oshkosh
John C. Thomson	Stevens Point
Arthur E. Wegner	Madison

ADMINISTRATION

✓ WILLIAM J. MICHEELS, PH.D.	President
✓ JOHN A. JARVIS, PH.D.	Dean of Instruction
GLADYS TRULLINGER M.S.	Acting Dean of the School of Home Economics
ROBERT SWANSON, PH.D.	Assistant Dean of the School of Applied Science and Technology
✓ DWIGHT L. AGNEW, PH.D.	Director of Liberal Studies
JOHN A. JARVIS, PH.D.	Director of Summer Session
✓ RALPH G. IVERSON, ED.D.	Dean of Student Affairs
RAY A. WIGEN, PH.D.	Dean of Graduate Studies
✓ STELLA M. PEDERSEN, M.A.	Dean of Women
✓ MERLE M. PRICE, M.A.	Dean of Men
JOHN FURLONG, PH.D.	Assistant to the President
ERICH R. OETTING, PH.D.	Director of Professional Teacher Education
FRANK J. BELISLE, M.A.	Registrar and Placement Chairman
E. J. SCHOEPP, A.B.	Business Manager
DONALD OSEGARD, B.A.	Student Admissions Examiner
ROBERT D. SATHER, M.S.	Financial Aids Officer
JAMES THOMPSON	Accountant
MINNIE J. BECKER	Secretary to the President
LOUIS RODEY, M.S.	Superintendent of Buildings and Grounds
MRS. ORA CHASE, R.N.	College Nurse
PHYSICIANS OF THE RED CEDAR CLINIC	College Physicians
DENNIS R. RAARUP, M.A.	Director of the Student Center
PHYLLIS D. BENTLY, M.S.	Librarian
MRS. BEULAH HOWISON, A.B.	Assistant Librarian
JOHN J. JAX, M.S.	Assistant Librarian
MARY R. DONLEY, M.A.	Assistant Librarian
MARY KILLIAN, M.A.	Director of Institution Management
DANIEL JEATRAN, B.S.	Food Service Supervisor
MRS. INA STONE	Resident Head of Bertha Tainter Hall
MRS. ALMA LUNN	Resident Head of Eichelberger Hall
MRS. ELLA UNSETH	Resident Head of Mary M. McCalmont Hall
HELMUTH ALBRECHT, B.S.	Director of Mens' Housing
ORVILLE NELSON, M.A.	Resident Head of Hovlid Hall
SYRILLA WOLD	Secretary to the Dean of Home Economics
MRS. EVA ROGERS, B.S.	Secretary to the Dean of Applied Science and Technology
MRS. CATHERINE OLSON	Secretary to the Dean of Graduate Studies
JUDY KERN	Secretary to the Dean of Men and the Dean of Women
MRS. FERN HELGESON	Secretary to the Dean of Student Affairs
MRS. ANN STANSBURY	Secretary to the Business Manager
JOAN CROWNHART	Secretary to the Registrar

COLLEGE COMMITTEES

	Chairman
Administrative Council	William J. Micheels
Accrediting	John Furlong
Admission and Credits	John A. Jarvis
Alumni Relations	E. Robert Rudiger
Assembly and Lyceum	Norman C. Ziemann
Athletics	Dwight D. Chinnock
Catalog and Publications	Anne Marshall
Commencement	Merle M. Price
Curriculum and Instruction	Robert Swanson
Faculty Services	Herman Arneson
Finance and Audits	E. J. Schoepp
Graduate	Ray A. Wigen
Institutional Studies	Dwight L. Agnew
Library	Phyllis D. Bentley
Placement and Follow-Up	Frank J. Belisle
Safety and Fire Prevention	Ray F. Kranzusch
Student Affairs	Guy Slayer
Undergraduate Fellows	Louis Klitzke

THE FACULTY ASSOCIATION

The Faculty Association was formally organized as a constitutional body in the spring of 1963. The Senate, an elected group within the association, represents and acts for the faculty.

To promote the professional welfare of the college and the faculty, to participate in policy determination for the college, and to carry on the social affairs of the faculty are the purposes of the association.

Officers of the association for 1963-64 are G. S. Wall, Chairman; Guy Salyer, Interim Vice-Chairman; and Betty S. Cotter, Secretary.

STOUT DEVELOPMENT ASSOCIATES, INC.

The Stout Development Associates, Inc., a non-profit organization incorporated under the laws of Wisconsin in April, 1962, exists to receive gifts of money and real property to be used for educational purposes at Stout State College. Gifts received are used for loans, scholarships, and other special purposes. The Advisory Committee consists of the following members.

John Furlong ----- Executive Director

ALUMNI REPRESENTATIVES

Herbert Anderson, Menomonie	Howard M. Heigl, Racine
James Bailey, Northfield, Minn.	P. T. O'Connor, Chicago, Ill.
Warren Barberg, Eau Claire	Charles A. Pagnucco, Kohler
William Baxter, Minneapolis, Minn.	Henriette Quilling, St. Paul, Minn.
Dorothy Condry, Wauwatosa	Robert Rudiger, Menomonie
Ray Cornwell, Bloomington, Ill.	Alyce Vanek, Menomonie
Kenyon S. Fletcher, Chicago, Ill.	Lloyd Whydotski, Menomonie
Stan L. Fox, Owatonna, Minn.	

PATRON REPRESENTATIVES

J. H. Hickey, Menomonie	James G. Solberg, Menomonie
Ralph Owen, Winona, Minn.	Mrs. Aleck Tilseth, Menomonie
Robert L. Pierce, Menomonie	

FACULTY REPRESENTATIVES

Herman C. Arneson	M. M. Price
Marguerite C. Barra	K. L. Rue
Frank J. Belisle	G. S. Wall
Stella M. Pedersen	Mary K. Williams
Robert L. Phelps	

EX OFFICIO REPRESENTATIVES

William J. Micheels	President, Stout State College
Lowell Tuft	President, Stout Alumni Association
William Vasey	President, Stout Student Association

STOUT ALUMNI ASSOCIATION

Lowell Tuft, President	Stillwater, Minnesota
Mrs. Audrey Hanson, Vice President	Franklin Park, Illinois
Robert Rudiger, Secretary-Treasurer	Menomonie, Wisconsin

BOARD OF VISITORS FOR INDUSTRIAL EDUCATION

The Board of Visitors is an organization of industrial leaders who contribute of their time and abilities to assist Stout State College in fulfilling its educational mission. Specific responsibilities of the board include fostering closer cooperation between industry and the college, providing counsel and advice regarding industrial education and industrial technology curricula, and informing the college of the kind of graduate needed by industry.

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- George A. Haberman, President, Wisconsin A.F.L.—C.I.O., Milwaukee
- Frank A. Hausher, Secretary, Wisconsin State Chamber of Commerce, Madison, Wisconsin
- Carleton C. Hitchcock, President, R. C. Hitchcock and Sons, Inc., Minneapolis, Minnesota
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- George Kurten, Personnel and Training Director, Western Printing and Lithographing Co., Racine
- Robert C. Lusk, Director, Automobile Manufacturers Association, Inc., Detroit, Mich.
- Dorr Snoyenbos, Director of Personnel, A. C. Spark Plug Division of General Motors, Milwaukee
- Robert H. Strenger, International Representative, United Brotherhood of Carpenters and Joiners of America, Madison
- J. L. Wiggins, Executive Vice President, Automotive Service Industry, Chicago, Ill.
- John R. Wrage, Public Relations Director, Gisholt Machine Company, Madison

FACULTY

- WILLIAM J. MICHEELS (1961) *President*
Stout State College, B.S.; University of Minnesota, M.A., Ph.D.
- DWIGHT L. AGNEW (1947) *Director of Liberal Studies. Head of the Department of Social Science. Professor. History*
Park College, A.B.; University of Iowa, A.M., Ph.D.
- WILLIAM D. AMTHOR (1960) *Instructor. Industrial Graphics*
Stout State College, B.S., M.S.; University of Minnesota, Graduate Study.
- HERBERT A. ANDERSON (1948) *Head of Department of Industrial Graphics. Professor*
Stout State College, B.S.; University of Minnesota, M.A.; University of Missouri, Ed.D.
- KETURAH ANTRIM (1936) *Associate Professor. Physical Education*
Lake Forest College, B.A.; University of Wisconsin, Ph.M.; Columbia University, Northwestern University, Graduate Study.
- HERMAN C. ARNESON (1945) *Associate Professor. Biology*
Northland College, B.A.; University of Minnesota, M.A., Graduate Study.
- PAUL A. AXELSEN (1956) *Assistant Professor. Printing*
Stout State College, B.S., M.S.
- DAVID P. BARNARD (1947) *Head of Audio-Visual Center. Professor. Audio-Visual Education, Photography*
Stout State College, B.S., M.S.; Indiana University, Ed.D.
- MARGUERITE C. BARRA (1961) *Head of Department of Clothing and Textiles. Associate Professor.*
Southern Illinois University, B.S.; George Peabody College for Teachers, M.A.; Texas Women's University, Ph.D.; Kansas City Art Institute, Graduate Study.
- PHYLLIS D. BENTLEY (1954) *Librarian. Associate Professor*
University of Wisconsin, B.A.; Columbia University, M.S.
- FREDERICK BLAKE (1959) *Instructor. Chemistry*
Ripon College, B.A.; University of Minnesota, M.S.

- LOIS BLAUG (1962) *Instructor. Sociology*
City College of New York, B.A.; University of Minnesota, M.A.
- DENNIS P. BOLSTAD (1961) *Assistant Professor. Education and Psychology*
St. Olaf College, B.A.; Macclaster College, M.Ed.; University of Colorado, Graduate Study.
- TODD A. BOPPEL (1963) *Instructor. Art*
University of Wisconsin, Milwaukee, B.S., M.S.
- IMO C. BROWN (1961) *Instructor. English*
Northwest Missouri State College, B.S.; University of Colorado, M.A.; University of Missouri, Graduate Study.
- LOIS E. A. BYRNS (1960) *Professor. English*
University of Wisconsin, B.A., M.A., Ph.D.; Columbia University, George Washington University, Graduate Study.
- CLARA C. CARRISON (1948) *Associate Professor. Food and Nutrition*
Western Illinois University, B.E.; University of Iowa, M.S.; Ohio State University, Pennsylvania State University, University of Tennessee, University of Minnesota, Iowa State University, Graduate Study.
- GEORGE CHAMBERS (1963) *Instructor. English*
Boston University, B.A.; University of Wisconsin, M.A.
- DWIGHT D. CHINNOCK (1940) *Supervisor of Student Teaching. Associate Professor*
Wisconsin State College, River Falls, Diploma; Stout State College, B.S.; University of Minnesota, M.A., Graduate Study.
- DOROTHY F. CLURE (1956) *Assistant Professor. Home Management and Family Economics*
Stephens College, A.A.; Iowa State University, B.S.; University of Chicago, M.A.
- BETTY SNYDER COTTER (1959) *Assistant Professor. Food and Nutrition*
Stout State College, B.S.; University of Michigan, Stout State College, Iowa State University, Kansas State College, M.S.
- E. WAYNE COURTNEY (1962) *Assistant Professor. Education and Psychology*
Purdue University, B.S., M.S., Ph.D.
- ELEANOR H. COX (1942) *Associate Professor. Chemistry*
University of Wisconsin, B.A., M.A., Graduate Study.

- SARAH ANN COX (1963) *Instructor. Clothing and Textiles*
Appalachian State Teachers College, B.S.; University of Tennessee, M.S.
- MARY FRANCES CUTNAW (1957) *Assistant Professor. Speech*
University of Wisconsin, B.S., M.S., Graduate Study.
- JAMES R. DAINES (1963) *Instructor. Electricity and Mechanics*
Stout State College, B.S., M.S.
- MARIAN DEININGER (1959) *Associate Professor. Sociology*
University of Minnesota, B.A., M.A., Ph.D.
- DONALD A. DICKMANN (1961) *Instructor. Biology*
Lakeland College, B.S.; South Dakota State College, M.S.; Iowa State University, Graduate Study.
- MARY R. DONLEY (1959) *Assistant Librarian. Assistant Professor*
University of Minnesota, B.A., M.A.; Columbia University, Graduate Study.
- EDWIN W. DYAS (1956) *Associate Professor. Wood Technics*
University of Nebraska, B.S.; University of Minnesota, M.A.; University of Omaha, Stout State College, Graduate Study.
- IRENE ERDLITZ (1950) *Assistant Professor. Physical Education*
Wisconsin State College, La Crosse, B.A.; Northwestern University, M.A.; University of Wisconsin, Graduate Study.
- KENNETH J. ERICKSON (1961) *Instructor. Industrial Graphics*
Wisconsin State College, Platteville, B.S.; University of Minnesota, M.A.
- WESLEY L. FACE (1957) *Head of Department of Metals. Associate Professor*
Northern State College, South Dakota, B.S.; Stout State College, M.S.; University of Illinois, Ed.D.
- NOEL J. FALKOFSKE (1962) *Instructor. Speech*
Wisconsin State College, River Falls, B.S.; Kent State University, M.A.
- EUGENE R. F. FLUG (1962) *Assistant Professor. Education*
University of Minnesota, B.B.A., B.S., M.A.
- RICHARD P. FRIEDRICH (1961) *Instructor. English*
St. Procopius College, A.B.; University of Wisconsin, M.S.

- JOHN FURLONG (1963) *Assistant to the President. Associate Professor*
University of Minnesota, B.S., M.A., Ph.D.
- JACK A. GANZEMILLER (1963) *Instructor. Industrial Technology*
General Motors Institute, B.; M.E. Purdue University, M.S.
- CLIFFORD C. GAUTHIER (1963) *Instructor. Mathematics*
St. Cloud State College, B.S.; Bemiji State College, M.S.
- HENRY J. GERBER (1961) *Assistant Professor. Metals*
Northern State College, South Dakota, B.S.; Oklahoma State University, M.S., Graduate Study.
- EARL W. GIERKE (1962) *Assistant Professor. Mathematics*
University of Minnesota, B.S., M.A.
- THOMAS E. GRAY (1961) *Instructor. Printing*
Northwestern State College, Louisiana, B.S., M.S.
- HAROLD HALFEN (1956) *Assistant Professor. Metals*
Fairmont State College, A.B.; Stout State College, M.S.
- MILDRED D. HALVORSON (1962) *Instructor. Clothing and Textiles*
Stout State College, B.S., M.S.; University of Minnesota, Graduate Study.
- MYRON HARBOUR (1947) *Associate Professor. Physics, Mathematics*
Wisconsin State College, Superior, B.E.; University of Wisconsin, Ph.M.
- MARGARET E. HARPER (1943) *Associate Professor. Home Economics Education*
Kansas Wesleyan University, B.S.; Kansas State University, M.S.; Colorado State University, Iowa State University, Graduate Study.
- RALPH G. IVERSON (1951) *Dean of Student Affairs. Professor. Education and Psychology*
Augustana College, B.A.; University of Minnesota, M.A.; University of California, Ed.D.
- MARGARET A. JAMES (1961) *Assistant Professor. Food and Nutrition*
University of Wisconsin, B.S., M.S.; University of Minnesota, Graduate Study.

- JOHN A. JARVIS (1946) *Dean of Instruction. Dean of the School of Applied Science and Technology. Professor*
University of Wisconsin, B.S. in Mechanical Engineering; Stout State College, B.S.; Wayne State University, M.Ed.; University of Minnesota, Ph.D.
- JOHN J. JAX (1959) *Assistant Librarian. Instructor*
Wisconsin State College, La Crosse, B.A.; University of Wisconsin, M.S.
- MICHAEL J. JERRY (1962) *Instructor. Industrial Graphics*
Rochester Institute of Technology, B.F.A., M.F.A.
- RAY C. JOHNSON (1938) *Head of Department of Physical Education. Associate Professor*
Moorhead State College, B.E.; Columbia University, M.A.; New York University, Graduate Study.
- DAVID M. KELLY (1962) *Instructor. English*
Michigan State University, B.A., M.A.
- MARY KILLIAN (1947) *Director of Institution Management. Professor*
Omaha University, B.S.; Creighton University, M.A.; Columbia University, St. Louis University, Graduate Study.
- DICK G. KLATT (1952) *Assistant Professor. Metals*
Stout State College, B.S., M.S.
- LOUIS L. KLITZKE (1960) *Associate Professor. Education and Psychology*
Southwestern College, A.B.; Colorado State College, M.A., Ed.D.
- RAY F. KRANZUSCH (1924) *Associate Professor. Electricity and Mechanics*
Stout State College, B.S.; Iowa State University, M.S.
- O. CLIFFORD KUBLY (1956) *Assistant Professor. Physics, Mathematics*
Wisconsin State College, Platteville, B.E.; University of Wisconsin, M.S.; Case Institute of Technology, University of South Carolina, Graduate Study.
- MARVIN M. KUFAHL (1956) *Assistant Professor. Metals*
Stout State College, B.S., M.S.
- LORNA S. LENGFELD (1956) *Associate Professor. Speech*
Iowa State Teachers College, Northwestern University, University of Minnesota, University of Wisconsin, B.A.; University of Wisconsin, M.A., Ph.D.

- EDWARD M. LOWRY (1959) *Professor. Biology*
Ripon College, A.B.; University of Michigan, University of North Carolina, Michigan State University, University of Missouri, Ph.D.
- EINO MAKI (1963) *Assistant Professor. Mathematics*
Ferris Institute, B.S.; University of Wisconsin, M.S.
- WILLIAM W. MAMEL (1964) *Instructor. Education.*
University of Minnesota, B.S., M.A.
- ANNE MARSHALL (1939) *Head of Department of Science*
Professor. Biology
Denison University, B.S.; Ohio State University, M.A., Ph.D.
- ROBERT EUGENE MCMURTRIE (1961) *Instructor. Audio-Visual Education, Photography*
Southern Illinois University, B.S.; Indiana University, M.S.
- ELLA JANE MEILLER (1950) *Head of Department of Food and Nutrition. Professor*
Kansas State College, B.S.; University of Wisconsin, M.S.; Kansas State College, University of Minnesota, Graduate Study.
- ROBERT J. MELROSE (1958) *Assistant Professor. History*
Stout State College, Wisconsin State College, Eau Claire, B.S.; Wisconsin State College, Superior, University of Minnesota, M.A.
- DWAIN P. MINTZ (1962) *Assistant Professor. Physical Education*
Mankato State College, B.S., M.S.
- EDWARD O. MORICAL (1957) *Assistant Professor. Electricity and Mechanics*
Bemidji State College, B.S.; Wayne State University, M. Ed., Graduate Study.
- ORVILLE NELSON (1963) *Assistant Professor. Education*
Stout State College, B.S.; University of Minnesota, M.A.
- OTTO NITZ (1952) *Professor. Chemistry*
Elmhurst College, B.S.; University of Iowa, M.S., Ph.D.
- EDFIELD A. ODEGARD (1956) *Head of Department of Music. Assistant Professor*
Concordia College, Minnesota, B.A.; University of Washington, M.A.; University of Iowa, Ph.D.; University of Minnesota, Northwestern University, University of Michigan, Graduate Study.

- ERICH RICHARD OETTING (1945) *Director of Professional Teacher Education. Head of Department of Education and Psychology. Professor*
Wayne State Teachers College, B.A.; University of Wisconsin, University of Nebraska, M.A., Ph.D.
- K. T. OLSEN (1947) *Associate Professor. Wood Technics*
Iowa State University, B.S., M.S., Graduate Study.
- DON R. ORTLEY (1961) *Instructor. Electricity and Mechanics*
Mankato State College, B.S.; Stout State College, M.S.
- WILLIAM OWEN (1961) *Assistant Professor. Chemistry*
Colorado State University, B.S.; University of Denver, M.A.; Colorado State College, Ed.D.
- STELLA M. PEDERSEN (1961) *Dean of Women. Professor. Education*
Wisconsin State College, River Falls, B.E.; University of Minnesota, M.A.; University of Minnesota, Northwestern University, Columbia University, Graduate Study.
- DIANNE S. PETERS (1963) *Instructor. English*
University of Massachusetts, B.A.; University of Pennsylvania, M.A.
- RALPH J. PETERSON (1962) *Instructor. Economics*
Gustavus Adolphus College, B.A.; University of Minnesota, M.A.
- BEATRICE A. PETRICH (1963) *Head of Department of Home Economics Education. Associate Professor*
University of Minnesota, B.S.; Colorado State University, M.E.
- ROBERT L. PHELPS (1961) *Assistant Professor. English, Journalism*
Morningside College, B.A.; Syracuse University, M.A.
- ARNOLD C. PIERSALL (1960) *Associate Professor. Wood Technics*
Iowa State Teachers College, B.A.; Colorado State College, M.A.; University of Missouri, University of Wyoming, Colorado State College, Graduate Study.
- MERLE M. PRICE (1929) *Dean of Men. Professor. Political Science*
St. Cloud State College, Diploma; University of Minnesota, B.S., M.A., Graduate Study.
- NEAL W. PRICHARD (1962) *Assistant Professor. Wood Technics*
University of Minnesota, B.S., M.A.; Pennsylvania State University, Ed.D.

- DENNIS RAARUP (1963) *Director of Student Center. Assistant Professor. Physical Education*
Gustavus Adolphus College, B.S.; University of Minnesota, M.A.
- MARY JOSEPHINE RATHKE (1959) *Assistant Professor. English*
College of Saint Teresa, A.B.; University of Wisconsin, M.A.
- CAROL A. RAYHILL (1963) *Assistant Professor. Psychology and Guidance*
Michigan State University, B.A.; Oklahoma University, M.S.; Cornell University, Graduate Study.
- MATTHEW RENESON (1949) *Assistant Professor. Physics, Mathematics*
Fitchburg Teachers College, B.S.; University of Minnesota, M.A.; Wayne State University, Clark University, University of Missouri, University of Wisconsin, University of Illinois, Graduate Study.
- EVELYN G. RIMEL (1961) *Associate Professor. Education and Psychology*
Montana State University, B.A., M.A.; Syracuse University, Ph.D.; Merrill-Palmer Institute, Graduate Study.
- CHARLOTTE L. ROSE (1961) *Assistant Professor. Home Management and Family Economics*
Olivet Nazarene College, B.S.; University of Illinois, M.S., Graduate Study.
- JANE ROSENTHAL (1962) *Assistant Professor. Home Economics Education*
Stout State College, B.S., M.S.
- E. ROBERT RUDIGER (1952) *Professor. Education*
Stout State College, B.S., M.S.; University of Missouri, Ed.D.
- K. L. RUE (1957) *Assistant Professor. Physics, Mathematics*
University of North Dakota, B.A.; University of Minnesota, M.A.; Ohio University, Kansas University, Graduate Study.
- PHILIP W. RUEHL (1948) *Head of Department of Electricity and Mechanics. Professor. Electricity*
Stout State College, B.S., M.S.; University of Minnesota, Ph.D.
- GUY SALTER (1948) *Professor. Education and Psychology*
University of Missouri, A.B., A.M.; University of Nebraska, Ph.D.; University of Minnesota, Graduate Study.
- JACK SAMPSON (1957) *Assistant Professor. Electricity and Mechanics*
University of North Dakota, B.S.; Stout State College, M.S.; University of North Dakota, Graduate Study.

- ROBERT T. SATHER (1960) *Assistant Professor. English*
St. John's University, B.S.; Marquette University, M.A.; University of Wisconsin, Graduate Study.
- GERALD SCHEMANSKY (1958) *Assistant Professor. Printing*
Stout State College, B.S., M.S.
- ROBERT P. SCHESVOLD (1962) *Instructor. Sociology*
Buena Vista College, B.A.; University of South Dakota, M.A.
- EDWIN SIEFERT (1949) *Associate Professor. Industrial Graphics*
Stout State College, B.S.; Wayne State University, M.E.; Stout State College, Pennsylvania State University, University of Illinois, University of New York, Bradley University, Graduate Study.
- BENITA GROTE SMITH (1943) *Associate Professor. Child Development*
Iowa State College, B.S.; Merrill-Palmer Institute, Iowa State University, M.S.; University of Minnesota, Graduate Study.
- GEORGE A. SODERBERG (1945) *Associate Professor. Wood Technics*
Stout State College, B.S.; University of Minnesota, M.A.
- WESLEY S. SOMMERS (1956) *Head of Department of Industrial Technology. Professor*
University of Michigan, B.S.E., A.M.; Syracuse University, University of Minnesota, Ph.D.
- MAX SPARGER (1959) *Assistant Professor. Physical Education*
University of Dubuque, B.S.; Macalaster College, M.Ed.
- ROBERT SPINTI (1957) *Assistant Professor. Electricity and Mechanics*
Stout State College, B.S., M.S.; Pennsylvania State University, University of Missouri, Graduate Study.
- BESSIE W. SPRATT (1963) *Assistant Professor. Home Economics Education*
Iowa State University, B.S.; Michigan State University, State University of Iowa, Iowa State College, M.S.
- ROBERT SWANSON (1950) *Assistant Dean of Applied Science and Technology. Head of Department of Wood Technics. Professor*
Stout State College, B.S., M.S.; University of Minnesota, Ph.D.
- RITA TODD (1963) *Instructor. Clothing and Textiles*
Stout State College, B.S., M.S.

- GLADYS TRULLINGER (1936) *Head of Department of Home Management and Family Economics. Professor*
University of Nebraska, B.S., M.S.; Colorado State College, Michigan State University, Iowa State University, University of Minnesota, Graduate Study.
- ALYCE D. VANEK (1954) *Assistant Professor. Art*
Stout State College, B.S., M.S.
- HAZEL VAN NESS (1929) *Professor. Clothing and Textiles*
Syracuse University, B.S.; Columbia University, M.A.; Columbia University, Michigan State University, Syracuse University, University of Tennessee, Graduate Study.
- BETTY JANE VIENS (1963) *Assistant Professor. Food and Nutrition*
University of Wisconsin, B.S.; Stout State College, M.S.
- G. S. WALL (1952) *Professor. Education*
Winona State College, Diploma; University of Minnesota, B.S., M.A., Ph.D.
- BARBARA A. WALLEY (1962) *Instructor. English*
Northern Illinois University, B.A.; University of Illinois, M.A.
- LLOYD WHYDOTSKI (1949) *Head of Department of Printing. Associate Professor*
Stout State College, B.S.; Colorado State College, M.A.
- THEODORE E. WIEHE (1954) *Associate Professor. Metals*
Oklahoma State University, B.S., M.S.; University of Missouri, Ed.D.
- RAY A. WIGEN (1933) *Dean of Graduate Studies. Professor. Education*
Wisconsin State College, River Falls, Diploma; University of Minnesota, B.S., M.A., Ph.D.
- MARY K. WILLIAMS (1954) *Assistant Professor. Art*
University of Wisconsin, B.S., M.A.; Graphis Lehr and Versuchsanstalt, Hertha Buchner Keramics, Vienna, New York University, Chicago Institute of Design, University of Wisconsin, Chicago Art Institute, Graduate Study.
- ROBERT F. WILSON (1960) *Instructor. Art*
Ohio State University, B.F.A., M.A.
- NORMAN C. ZIEMANN (1949) *Head of Department of Speech. Professor*
Wisconsin State College, La Crosse, B.S.; Northwestern University, M.A., Ph.D.

EMERITUS

VERNE C. FRYKLUND, *President* (1945-1961)

Stout State College, Diploma; Colorado State College, A.B.; University of Missouri, M.A.; University of Minnesota, Ph.D.

CLYDE A. BOWMAN, *Dean of the School of Industrial Education* (1919-1953)

Wisconsin State College, River Falls, Diploma; Stout State College, Diploma; Columbia University, B.S.; University of Wisconsin, M.S., Graduate Study.

ALICE J. KIRK, *Dean of the School of Home Economics* (1947-1963)

University of Wisconsin, B.S.; Columbia University, M.A., Ed.D.

RUTH E. MICHEALS, *Dean of the School of Home Economics* (1927-1947)

Stout State College, Diploma; University of Chicago, Ph.B.; Columbia University, M.A.

FREDA M. BACHMANN, *Biology* (1924-1939)

Miami University, Ohio, A.B., M.A.; University of Wisconsin, Ph.D.

GERTRUDE L. CALLAHAN, *English* (1927-1961)

University of Chicago, Ph.B.; University of Wisconsin, Ph.M.; Bread Loaf, Vermont, University of Wisconsin, Graduate Study.

LILLIAN CARSON, *Related Art* (1927-1946)

University of Chicago, Ph.B., M.S.

MARGARET WINNONA CRUISE, *Food and Nutrition* (1927-1947)

University of Toronto, B.A.; Columbia University, M.S.

FRED L. CURRAN, *Industrial Education* (1908-1941)

Stout State College, B.S.; University of Minnesota, M.A.

LILLIAN M. FROGGATT, *Librarian* (1924-1955)

University of Wisconsin, B.A.; University of Michigan, A.M.L.S.

H. M. HANSEN, *Woodworking* (1912-1952)

Stout State College, B.S.; University of Minnesota, M.A.

MABEL ROGERS HUGGINS, *Food and Nutrition* (1935-1947)

Michigan State University, B.S.; Columbia University, M.A.

- LILLIAN JETER, *Clothing and Textiles* (1927-1961)
Kansas State College, B.S.; Columbia University, M.A.; University of Nebraska, Columbia University, Graduate Study.
- FLOYD KEITH, *Metalworking* (1922-1961)
Wisconsin State College, River Falls, Diploma; Stout State College, B.S.; Iowa State University, M.S.
- MABEL H. LEEDOM, *Chemistry* (1910-1941)
Columbia University, B.S., M.A.
- MARY M. MCCALMONT, *Chemistry* (1912-1952)
Westminister College, B.S.; University of Wisconsin, M.S.
- HAROLD C. MILNES, *Machine Shop* (1916-1954)
Armour Institute, Certificate; Stout State College, B.S.; Iowa State University, M.S.
- ANN NOBLE, *Home Economics Education* (1947-1963)
Simpson College, A.B.; University of Wisconsin, M.S.; Colorado State University, Ohio State University, Iowa State University, Graduate Study.
- GERTRUDE M. O'BRIEN, *Registrar* (1928-1955)
University of Wisconsin, Ph.B., Ph.M.
- J. E. RAY, *Drafting* (1914-1959)
Williamson Trade School, Diploma; Stout State College, B.S.; Iowa State University, M.S.; New York University, Ed.D.
- F. E. TUSTISON, *Science, Mathematics* (1920-1951)
Ohio Wesleyan University, B.S.; University of Wisconsin, M.S.

COOPERATING SCHOOLS IN THE STUDENT TEACHING PROGRAM

HOME ECONOMICS

ON CAMPUS

School	Supervising Teacher	Administrator
Menomonie High School	Frances Schneider Judith Jax	William Terrill, Superintendent Lyle Pollock, High School Principal Edward Phelan, Junior High School Principal

OFF CAMPUS

Arcadia High School	Merle Twesme	W. B. Gautsch, Administrator John J. Koetting, Principal
Blair High School	Charlotte Kling	Archie Buckmiller, Supervising Principal
Colfax High School	Darlene Engstrom	D. P. Rice, Supervising Principal
Eau Claire Memorial High School	Alma Durth	Homer E. DeLong, Superintendent John Gallagher, Principal
Eau Claire North High School	Ellen Peterson	Homer E. DeLong, Superintendent David Barnes, Principal
Elk Mound High School	Mary Cartwright	Robert L. Deetz, Supervising Principal
Fountain City High School	Ruth Schaffner	Richard Peterson, Administrator Ralph E. Leahy, Principal
Glenwood City High School	Patricia Meredith	Wallace Johnson, Superintendent John Oakeson, Principal
Hammond High School	Avalene Swanson	Marvin Berg, Administrator Roland C. Beiswanger, Principal

Independence High School	Marie Brinckner	W. W. Brinckner, Supervising Principal
LaCrosse, Longfellow Junior High School	Betty Taylor	John A. Bjorge, Superintendent Donald R. Kinney, Principal
Ladysmith High School	Dragica Nerbun	H. Schoitz, Superintendent Emmett J. Duffy, Principal
Marathon High School	JoAnn Hansen	J. C. Gillman, Supervising Principal
Medford High School	Sybil Widvey	Orvus Dodsworth, Superintendent James Fricke, Principal
Mondovi High School	Jane Klatt	W. H. Hehli, Superintendent John C. Herpst, Principal
Nekoosa High School	Carol Perso	A. W. Krohn, Superintendent Joseph Boettcher, Principal
Owen-Withee High School	Sadie Mundt	Elwyn D. Roberts, Superintendent John Shier, Principal
Owen-Withee Junior High School	Louise Olszewski	Elwyn D. Roberts, Superintendent Myron J. Fritsch, Principal
Prairie Farm High School	Avis Ranney	Eugene Baraboo, Supervising Principal
Whitehall High School	Judith Lee	John F. Brown, Administrator James Olson, Principal

INDUSTRIAL EDUCATION

ON CAMPUS

School	Supervising Teacher	Administrator
Menomonie High School	James R. Heggen, Supervisor William Wulf Bruce Walley	William Terrill, Superintendent Lyle Pollock, High School Principal Edward Phelan, Junior High School Principal

OFF CAMPUS

Altoona High School	Wayne West	Einer Pederson, Principal
Beaver Dam High School	Clinton Byrnes Edward Krause Orlando Paciotti Otto Steinike	Eric T. Becker, Superintendent Robert Whitnall, Principal
Black River Falls High School	Raymond D. Johnson	M. C. Schmallenberg, Superintendent
Colby High School	Neil Miller	Edward B. Sasse, Supervising Principal
Durand High School	Clyde Schwellenbach	Gordon H. Heuer, Superintendent
Eau Claire, Central Junior High School	Orville Torgerson	Homer E. DeLong, Superintendent Donald J. Mathison, Principal
Eau Claire, North High School	Clifford Culver	Homer E. DeLong, Superintendent David Barnes, High School Principal Vernette Peterson, Junior High School Principal
Eau Claire, Regis High School	Robert Duren	Rev. John D. Rossiter, Principal
Eau Claire Technical Institute	August Bell Fred Brechlin Vincent Myrick Elmer Roos	Willard D. Enge, Director
Green Bay, Preble High School	Robert Boehm	John F. David, Administrator Peter C. Hamel, Principal
Hudson High School	Alvin Weitkamp	E. P. Rock, Superintendent W. G. Heiting, Principal
Hurley High School	Zenda DeRubeis	Roland Van Slyke, Principal
Kaukana Vocational School	William E. Roerig Walter J. Vernon	D. J. Bordini, Director
LaCrosse, Central High School	Robert McLeod Richard Mitchell David Soderberg	John A. Bjorge, Superintendent Willard W. Hanson, Principal

LaCrosse, Coleman Vocational and Adult Schools	James A. Becker Neal O. Stromstad	Arthur F. Jordan, Director
Ladysmith High School	John Cardinal	Harold Schiotz, Superintendent
Manitowoc, Lincoln High School	Harry Olstad, Chairman Stanley Allen Lawrence Bohn Gordon Heffernan Warren Schuster	C. E. Jones, Superintendent Rufin W. Boyd, Principal
Marion High School	Robert Eggleston	Lloyd F. Nell, Superintendent
Menasha High School	Charles Bruemmer V. I. Halversen Vernon Knox Giles Woolf	M. J. Gegan, Superintendent H. L. Sherman, Director of Vocational Education
Neenah High School	Al Poellinger	Donald Scott, Superintendent H. O. Borgen, Principal
Plymouth High School	Ernest Hauke George Haffeman	Eldon M. Amundson, Superintendent
Rice Lake High School	Francis Miller	Louis M. King, Superintendent W. L. Swanson, Principal
Ripon High School	Harlyn Misfeldt	Duane R. Alf, Superintendent John N. Zei, Principal
Shawano High School	Fred Ponschok John Reilly	Charles Hub, Superintendent Everett Thomas, Principal
Stevens Point, Jacobs High School	Ray A. Gerke Willard J. Schlice	A. Moldenhauer, Superintendent A. G. Bostad, Principal
Two Rivers High School	Anton Kotyza	George M. O'Brien, Superintendent Earl G. Kromer, Principal

Waupaca High School	John Morgan	George Hendrickson, Superintendent Clarence Riddle, Principal
Wausau Senior High School	Allen Johnson Carl Putman Paul Smith	G. W. Bannerman, Superintendent Marshall Taylor, Principal
Wausau Technical Institute	Lawrence Ferdon Norman Lerch	Lawrence B. Hoyt Director

GENERAL INFORMATION

Stout State College is the Wisconsin state college of industrial, vocational, and home economics education. It is the only college in America devoted exclusively to the education of men and women for work in these professional areas.

Stout State College has been preparing teachers for vocational, industrial, and home economics education since 1893. At first, provision was made for only a two-year course, but in 1917 the four-year course, and in 1935 the fifth year on the graduate level, leading to the degree of Master of Science, were authorized. During these years of development and expansion, Stout held consistently to the function of preparing teachers and administrators in these fields of work.

In addition to teaching and administrative positions in education, students in industrial education as well as industrial technology may prepare for technical and executive positions in industry. Graduates have found advantageous employment as trainers in education departments of industrial plants, in production and planning departments of manufacturing plants, in maintenance departments, as technically trained salesmen, and in various other types of employment in industry.

The home economics courses at Stout provide preparation directed toward a variety of vocations in addition to teaching. Students are prepared for responsible positions as dietitians, home demonstration agents, teachers and supervisors of nursery schools, and managers of cafeterias and restaurants. Graduates are also qualified to enter the fields of commercial demonstration; food, textile, and equipment research; home economics journalism; and family life education. Regardless of what field a student may plan to enter, an education in home economics is the kind of specialized and cultural education which will prepare her for marriage and citizenship.

Provisions are made for students to complete requirements for the degree of Bachelor of Science or to take undergraduate work beyond the degree requirements for refresher purposes. Graduate work is offered during both the regular session and the summer session. This curriculum leads to the degree of Master of Science with the major in vocational education, industrial arts education, home economics education, guidance and counseling, and audio-visual education. For persons interested in study in these fields, Stout State College has unusual facilities and an unexcelled faculty. A special *Graduate Studies Bulletin* is available for interested persons.

The college year is thirty-six weeks in length. There are two semesters of eighteen weeks each. The summer session, which opens each year in June, two weeks after the close of the regular session, is eight weeks in length. Special short courses of one or two weeks' duration are held both before and after the regular summer session.

HISTORY

The heritage of Stout State College is linked to the career, foresight, and generosity of Senator James H. Stout, pioneer Menomonie lumberman. Senator Stout's respect for acquired skill prompted him to establish a program of manual training and domestic science in the Menomonie grade and high schools in 1889.

The program soon outgrew the facilities and resources of the public schools, however, and by 1893, new buildings were constructed and the Stout Manual Training and Domestic Science School became independent but remained under the patronage of Senator Stout.

Guided by President Lorenzo Dow Harvey, who was appointed in 1903, the school grew and in 1908 changed its name to The Stout Institute. Three years later and one year after the death of Senator Stout, the institute was put under control of a board of trustees appointed by the state of Wisconsin.

With state support, The Stout Institute continued to progress in the pattern envisioned by its founder. In 1917, state legislative action made it a degree-granting college. Evolution continued under the leadership of Presidents Harvey and Burton E. Nelson; in 1935, The Stout Institute was authorized to offer postgraduate study and to grant the Master of Science degree in industrial education, vocational education, and home economics.

Dr. Verne C. Fryklund became president of the college in 1945. In 1955 the school became Stout State College and was placed under the jurisdiction of the Board of Regents of Wisconsin State Colleges. The school was also authorized to grant the Bachelor of Science degree in industrial technology in addition to the other degrees certified previously.

Dr. Fryklund guided the college through the period of burgeoning enrollment immediately after World War II and saw it well into a major building program before he passed the responsibility in 1961 to Dr. William J. Micheels, an alumnus of The Stout Institute, who became the college's fourth president.

In the early and middle 60's, the building is continuing, prospects for enrollment show a rising curve, but the college remains remarkably true to the purposes Senator Stout espoused. The reputation of the college, as established and maintained by the success of its graduates, has become world-wide and continues to be unsurpassed in its field.

OBJECTIVES OF THE COLLEGE

The objective of any college is to supply its students with knowledge, experience, and service in keeping with its general purpose. The basic objective of Stout State College can be stated in this way: to introduce students to the basic areas and systems of knowledge, to instill in them a desire

to examine their lives' experiences critically and to provide the tools with which to make that examination, to induce them to use the knowledge they acquire and the critical faculties they develop to pursue to depth a vocational specialty.

Beyond this general objective, Stout State College has several specific educational aims. It hopes to instill in each student the ability and desire to:

1. Think constructively and creatively.
2. Participate in the discussion and solution of local, national and international problems.
3. Achieve a sense of social responsibility leading to a concern for the improvement of society.
4. Understand and appreciate the ideas of others and express his own effectively.
5. Understand the important discoveries of mankind and their impact on humanity.
6. Comprehend literature, art, music, crafts, and drama as expressions of others' experiences.
7. Attain social and emotional adjustment.
8. Attain a constructive attitude toward change; accept it when it seems necessary, or reject it when it seems unwarranted.
9. Enter a suitable occupation and advance in it to the limit of his abilities.

In addition to the personal values it hopes to help its students realize, Stout State College also serves three broad, interrelated functions as an institution chartered by the state:

The Education Function

1. Provide guidance and counseling to aid students in identifying their problems and selecting suitable courses of action.
2. Prepare professional personnel for a variety of levels and types of schools.
3. Prepare persons for professional positions in business and industry.
4. Provide a liberal cultural background for students regardless of specialty.
5. Provide a broad technical background to students preparing to engage in specialized work.
6. Prepare students to transfer to other colleges for specialties other than those offered by the college.

The Service Function

1. Provide leadership to the profession in the areas of work offered by the college.
2. Provide professional service to schools in the form of consultation, evaluations, in-service education, curriculum planning, and plant development.
3. Provide professional service to business and industry and serve as objective critics in the fields in which the college specializes.
4. Contribute to an improved cultural tone for the community through the production, sponsorship, and promotion of cultural activities.

The Scholarship and Research Function

1. Serve as a stimulus to the continuous intellectual development of the faculty.
2. Be aware of and sensitive to the constantly accumulating body of knowledge in the areas of the college's concentrations and aid in its dissemination.
3. Add to the body of technical and professional knowledge by adaption, analysis, synthesis, and evaluation of existing and developing knowledge.
4. Increase the wealth of knowledge through research in the fields of the college's concentrations.

ENROLLMENT

While most of the students come from Wisconsin, almost every state in the Union has been represented in the enrollment at Stout State College. Through the years the enrollment at Stout has been more than national in character. In the past years students have attended from the following countries: Afghanistan, Bolivia, Brazil, British Honduras, Canada, China, Colombia, Costa Rica, Cuba, Ecuador, El Salvador, England, Ethiopia, Finland, Formosa, Germany, Greece, Hungary, Indonesia, Iran, Iraq, Israel, Italy, Jamaica, Japan, Jordan, Korea, Lebanon, Libya, Malaya, Nicaragua, Nigeria, Pakistan, Panama, Paraguay, Philippine Islands, Peru, Sudan, Taiwan, Thailand, Trinidad, Tunisia, Turkey, Vietnam, and West Cameroons.

Stout graduates are teaching in every state of the Union, Canada, Latin America, and many countries in the Eastern Hemisphere.

BUILDINGS AND GROUNDS

Six large, thoroughly equipped buildings, Harvey Hall, Bowman Hall, Ray Hall, Fryklund Hall, the Memorial Student Center, and the Pierce Library, comprise the central plant; a seventh major building, the physical education plant, is now under construction. The student center is being expanded to meet increased enrollment pressures. In addition, there are five residence halls and two home management houses. The grounds include spacious lawns for the women's dormitories, housing units for married students, practice field, tennis courts, and the Burton E. Nelson Athletic Field.

THE LIBRARY

The Robert L. Pierce Library houses 60,000 volumes and seats 250 readers. It has a small auditorium, seminar rooms, and facilities for educational displays. The library provides a wide range of reference material, particularly on home economics and industrial and vocational education. It is also rich in the fields of art, the social and natural sciences, mathematics, engineering, manufacturing, and industry. A large number of books and magazines for purely cultural reading is provided.

LABORATORIES AND EQUIPMENT

The shops for the teaching of industrial subjects are well-equipped and modern. Ray Hall is devoted exclusively to shops containing complete equipment for elementary and advanced classes in building construction, woodworking, and industrial graphics. Bowman Hall contains shops completely equipped for work in printing and audio-visual aids and photography as well as laboratories and lecture rooms for courses in the arts and sciences. The college carillon is located in the Bowman Hall tower. Fryklund Hall, constructed in 1961, contains metalworking shops, electrical laboratories, the music department, and classrooms.

The home economics laboratories in Harvey Hall have recently been extensively remodeled and re-equipped. This modernization program includes the laboratories used for art and home furnishings, child development, food and nutrition, home management, clothing and textiles, home economics education, and the sciences. Adequate lighting and modern furnishings and equipment allow effective instruction in pleasant and comfortable surroundings. Stout State College home economics laboratories, because of their unique nature and functional arrangement, have attracted hundreds of visitors from the United States and many other countries.

AUDITORIUM

One of the wings of Harvey Hall houses a modern auditorium with a seating capacity of 800. Educational and entertaining programs are frequently presented by nationally-known speakers or performers. The large stage makes possible the appearance of orchestral and choral groups and provides excellent facilities for dramatic offerings.

HOME MANAGEMENT HOUSES

Two thoroughly modern and fully equipped home management houses, Amon House and Michaels House, provide all conveniences and accommodations desired in buildings of this type. Each house contains living room, kitchen, laundry, and the director's living quarters in addition to comfortable, well-lighted rooms.

RESIDENCE HALLS

Three residence halls are provided for women. Bertha Tainter Hall and Eichelberger Hall are located on spacious grounds overlooking Lake Menomin. Mary A. McCalmont Hall is situated in the new part of the campus. The reception rooms and student living quarters are all comfortably and attractively furnished. The dining room in Tainter Hall serves carefully planned meals to all dormitory residents in that area. The charge for meals is maintained at as low a rate as possible under the prevailing price structure. Laundry facilities are available at a minimum charge to students living in these dormitories.

Two new dormitories for men, Fleming Hall and Hovlid Hall, are located near Tainter Hall on Broadway. Students' living quarters and reception rooms of these modern structures are all comfortably and attractively furnished.

All nonresident freshmen and transfer students are required to live in the college residence halls. All sophomore students under twenty-five years of age are also expected to live in the residence halls when such accommodations are available.

Rooms are available on the Sunday immediately preceding registration day in the fall. All rooms are assigned for the entire academic year. Each room is furnished with single beds and inner-spring mattresses, pillows, dresser, study table, chairs, study lamp, and bookcase. Sheets, pillow cases, drapes, and bedspreads are supplied. Students are requested not to bring additional furniture, particularly floor lamps. Radios are permitted in the rooms provided the students comply with the regulations for radios. Radio and television are available for general use in the main lounge of each building.

Accommodations for men and women students not living in the dormitories may be procured in the city.

THE TEA ROOM

The Stout Tea Room in Bertha Tainter Hall is used chiefly as a laboratory for classes in applied institution management. Attractive, well-balanced, inexpensive meals are served. The Tea Room is open to students, faculty, and their friends.

THE MEMORIAL STUDENT CENTER

The new two-story student center provides varied recreational facilities. On the first floor are a snack area, game room, hobby room, reading and television viewing areas, and space for a checkroom and for equipment maintenance. A large area on the second floor of the building is equipped to serve both as a ballroom and as a large meeting place. In addition, conference rooms, office space, and lounges are provided. In 1963-64 the student center will be expanded to more than double the present area.

PIGEON LAKE CAMP

Although 150 miles away, the state college system's Pigeon Lake Camp is an integral part of the Stout campus.

The camp is located in southeast Bayfield County just west of Drummond, Wisconsin, and is used during the summer for special courses in Biology, Art, Outdoor Education and Recreation.

Courses at Pigeon Lake Camp carry Stout residence credit and work is offered on both the undergraduate and graduate levels. Information on the summer schedule may be obtained by writing to Board of Regents, State Colleges, Madison 2, Wisconsin, or Director of Summer Session, Stout State College.

REGULATIONS CONCERNING AUTOMOBILES

Students should not bring their automobiles to the college campus for regular use. Married students and commuters are exempted. The added expense involved in operation, the absence of convenient parking facilities, and the hazards of the automobile form the basis for this recommendation. A student owning an automobile would have difficulty obtaining a student loan.

If a student must operate an automobile, however, certain regulations must be observed.

1. The automobile must be registered in the Office of the Dean of Men. A student who operates an automobile for more than two weeks and who fails to register the vehicle may be suspended from college.
2. Possession of a drivers license, coverage by liability insurance, approval of the automobile for mechanical safety when inspection is requested, and parental consent for a student who is a minor form other basic requirements for automobile operation.

COLLEGE ATTENDANCE AND MILITARY OBLIGATIONS

Menomonie maintains a unit of the Wisconsin National Guard, with headquarters in the armory located adjacent to the campus. Many students attending Stout belong to this unit.

It is possible for a man who joins a national guard unit before he is 18½ years old and who then attends that unit's weekly drills to be exempt from the selective service. A student who belongs to another guard unit within Wisconsin can continue his drill in Menomonie and still maintain the military status which he had while at home. Persons in national guard units in other states can make somewhat similar arrangements. All of the aforementioned persons will be permitted under written regulations to complete their college education.

Not only can a man fulfill his military obligations in this way, but his unit's weekly drill periods make it possible for him to earn an average of at least \$12.00 per month.

ACADEMIC INFORMATION

Registration Periods

Registration of students for all schools and departments occurs at the beginning of the first semester in September, at the beginning of the second semester in January, and at the beginning of the summer session in June. Registration for technical courses offered in the School of Applied Science and Technology may also occur at the beginning of the second and fourth nine-week periods of the college year. The college calendar near the beginning of this bulletin indicates the dates for these registration periods.

Admission Procedures

Application for admission forms may be received from the Admissions Examiner. These forms should be filed with the Registrar as early as possible before the intended date of enrollment. High school seniors who plan to enroll are encouraged to file application for admission forms during their last semester of high school attendance. These forms include a health examination form and a housing form, as well as the application for admission itself, which contains a certified record of high school work and a recommendation by the high school principal. When students apply for admission before high school graduation, a separate form containing the last semester's record is obtained from the high school after graduation. All applicants for admission are required to participate in the American College Testing (ACT) program. The results of these tests are of great value to the individual, the high school, and the college in the development of appropriate educational and vocational goals. The ACT program provides scores in English, mathematics, natural science, and social science. A composite score is also provided. Students who have not taken the ACT prior to their college enrollment will be required to do so as a part of registration. The required fee will be assessed.

Entrance Requirements

Students admitted to Stout consist of three groups:

1. Those who have graduated from an approved high school with a satisfactory record.
2. Those who have submitted evidence of studies pursued successfully in another institution of higher learning.
3. Those who qualify as adult special students.

HIGH SCHOOL GRADUATES

Entrance requirements for high school graduates are as follows:

1. Graduation from a legally established public or private high school with 16 units of work. (A unit represents a norm of five class periods per week in one field of study for a school year of 36 weeks.)

2. Recommendation that the student be admitted by the principal of the high school.
3. Rank in upper three-fourths of the graduating class.
4. A minimum of nine units of credits from the following fields: English (a minimum of three credits), speech, foreign language, natural science, history and social science, and mathematics.
5. Students who do not meet the requirements outlined in Items 3 and 4 above may become eligible to be admitted for the fall semester by attending and establishing a satisfactory record in the college's summer session.

TRANSFER STUDENTS

As Stout curricula require both breadth of academic and professional courses and a heavy concentration in a highly specialized field, students who expect to graduate from the college are advised to enter during the freshman year. It is difficult for students after the sophomore year. Those who attend Stout from the outset of college attendance attain a better balanced program.

If a student has attended any other institution of higher learning, a transcript of his record at that college should be filed with the Registrar at least a month prior to the opening of the session the student desires to enter. Such transcripts are in addition to the regular application for admission forms. College transcripts are required as an evidence of good standing even if the student earned no credit or if he desires no transfer of credit. Failure to declare previous college attendance may result in loss of credit and suspension.

Credits earned in accredited institutions of higher learning and carry a grade of "C" or better are accepted so far as they fit into the curriculum which the student selects at Stout. Correspondence credits, together with other extension credits, may not exceed one half the number of credits required for graduation. Special permission must be obtained by students from the dean of the school concerned before taking correspondence courses intended for transfer.

Students who are ineligible to return to a college last attended will not be considered for admission to a Wisconsin State College during the next regular semester following such ineligibility. Students desiring to transfer to the Wisconsin State Colleges from other colleges will have the same status relative to admission and retention as in the college last attended.

ADULT SPECIAL STUDENTS

Adults over the age of 21 may be admitted even though they have not completed high school if scholastic success and appropriateness of the offerings of the college are indicated by tests and interviews conducted at the college. Those who expect to enter as adult specials should arrange with the Dean of Student Affairs for such testing and interviewing well in advance of the term for which entrance is desired.

VETERANS

Veterans may belong in any one of the three groups described above. Special provisions are made for admitting veterans of the United States armed forces. Curriculum adjustments provide modified programs to meet individual needs. Credit for educational experience in the armed services is given according to the recommendation of the guide compiled by the American Council on Education.

Records of Students

Applications for admission and scholarships, as well as a permanent record of all courses for which a student enrolls, are kept in the Registrar's Office. Other personnel records, including guidance test results, are maintained in the Student Personnel Office. Students are invited to check from time to time with these offices so that knowledge of these records may be used in programming and other planning.

Scholarship Standards

Credit for work done at the college is expressed in semester hours. A credit of one semester hour represents the satisfactory completion of the work of one recitation a week for a period of one semester. A course having five recitations a week will therefore give five semester hours of credit. Two hours of laboratory work will count as one credit hour.

In order to receive a degree, the student not only must gain the required number of credits in the course which he is pursuing, but also must attain a certain standard of scholarship. This standard is fixed by grade points as credits. Grade points are apportioned as follows:

- A 4 grade points per semester hour credit—Excellent
- B 3 grade points per semester hour credit—Good
- C 2 grade points per semester credit—Average
- D 1 grade point per semester hour credit—Poor
- F 0 grade points per semester hour credit—Failure

Inc. (incompletes) are given only in cases in which the absence incurred has been due to situations over which neither the student nor the instructor has any control. To secure an incomplete, a student must have a passing grade in the course before the absence. A failure will be recorded if the incomplete is not removed within one calendar year.

All program changes must be approved by the dean of the school. The grade WD will be recorded for courses from which a student is permitted to withdraw within the first two weeks of a quarter course and within the first four weeks of a semester course. The grade WP will be recorded if withdrawal occurs after the above stated periods and the student is passing at the time he secures permission to drop the course. The grade WF will be recorded if the student is failing at the time of withdrawal.

Student Programs

Students whose total grade point average is 3.5 or better may enroll for a maximum of 20 credits. Students whose grade point is better than 3.0 but less than 3.5 may register for a maximum of 18 credits. Students whose average is less than 3.0 may register for no more than 17 credits except with special permission of the dean of the appropriate school. It is recommended that students on probation be advised to carry a reduced program.

INDEPENDENT STUDIES

Special opportunities are provided by some departments for individual study, particularly in those phases of the field of specialization not provided for in formal courses. Through Independent Study, a student may assume a greater responsibility for his own learning than through a formal course. At least 54 clock hours of study are considered necessary for one semester hour of college credit.

The same conditions for registration apply as for any other course. In addition, approval for Independent Study must be obtained. An application for an Independent Study course is available for this purpose. A brief outline of the proposed study must be presented at the time approval is requested.

The quality of the study will be evaluated by the instructor directing the study. The form and style of the report should be in agreement with the thesis manual currently approved by the Graduate Committee and in agreement with the standards of the English Department.

HONORS COURSES

Several honors courses are offered each year. An honors course is intended for students who present evidence of mastery of basic concepts of the subject. Additional opportunities for enrichment are provided.

Attendance Regulations

Any student who is too ill to attend classes should have the supervisor of his housing unit report at once to the College Nurse. A student living at home should have his parents or guardian notify the College Nurse. Cases of severe illness or other serious situations that will enforce prolonged absence should be reported to the Dean of Women or to the Dean of Men.

The day before and the day following a vacation are "no cut days". One negative grade point will be recorded for each unexcused absence from a class on a "no cut day".

Freshmen, sophomores, probation students, and new transfer students are expected to attend meetings of every class. When a student's unexcused absences exceed by one the number of credits in the course, the student will be dropped from the course and automatically receive a grade of "F".

Juniors and seniors are expected to comply with the class attendance requirements announced by each instructor and clear their absences directly with the instructor of each class.

The classification of students as recorded in the Registrar's Office shall be used for implementing attendance regulations.

Requirements for Graduation

The graduation requirements in the School of Home Economics are at least 128 semester hours and 256 grade points. The graduation requirements for the School of Industrial Education are 130 semester hours of credit and 260 grade points. The normal time required for the completion of these requirements is four years and results in the awarding of the Bachelor of Science degree. Meeting the requirements for graduation is a responsibility of the student.

Students graduating with a major in dietetics meet the requirements set up by the American Dietetic Association.

The minimum residence requirement is 32 semester hours and 64 grade points to be earned in at least 36 weeks of attendance at Stout State College. The last year of credit must be earned in residence at Stout State College. Candidates for degrees are required to attend the commencement exercises. Registration with the Placement Office is a requirement for graduation.

Graduation with Honors

In each graduating class, the selection of students for high distinction and distinction is based upon scholarship, personality, promise of success, social attitudes and accomplishments, and contribution to the college. A student must have a minimum grade point of 3.0 and have earned at least 60 semester hours of credit in residence one semester prior to graduation to be considered for honors. The high distinction group is not more than 5% of each of the graduating groups, and the distinction group not more than 10%. These honors are indicated on the commencement program and are made a part of the student's permanent record.

FINANCIAL INFORMATION

FEES

Since the catalog must be prepared far in advance, all fees, room and food rates, and other charges are subject to change without notice in this catalog. Fees are payable registration day at the beginning of each semester and summer session. The fee receipt is to be retained by the student. Students are not admitted to classes without this receipt.

Fees for One Semester

Incidental Fee -----	\$95.00
Student Activity Fee (including membership in Student Center) --	26.00
Textbook Rental Fee -----	6.00

TUITION

There is no tuition charge for residents of Wisconsin. The tuition for nonresidents is \$178.00 per semester. A nonresident is defined as any student who has not been a resident of the state for one year preceding his first admission to Stout State College.

STUDENT ACTIVITY FEE

All students are members of the Stout Student Association. The student activity fee entitles every student of the college to admission to all athletic events, to all concerts given by the student musical organization, to productions by the dramatic organization, to lyceum and assembly programs sponsored by the college, and to all student dances given under the auspices of the student association. The fee also covers the cost of subscription to *The Stoutonia*, the student weekly newspaper; *The Tower*, the college annual; class membership; and membership in the Student Center. The activity fee also covers a portion of the cost of first-aid service and treatment for minor illnesses by the college physician.

TEXTBOOK FEE

Textbooks are supplied to undergraduate students on a rental basis at the rate of \$6.00 per semester.

INTERNATIONAL STUDENT FEES

International students are required to pay a small fee to partially defray the expenses of the special international program set up by the college. This program includes academic advisement, assistance in orientation and personal adjustments, and field trips. The fees are \$25.00 per semester or \$15.00 per quarter or summer session.

DORMITORY ROOM AND FOOD COSTS

Currently, room and board (20 meals per week) at Tainter, Fleming, and Hovlid Halls, is \$326.00 per semester when paid in advance. In McCalmont Hall, for upperclass women, a room costs \$138.00 per semester. Meals are not provided at McCalmont at present but will be available in the near future.

The deposit of \$20.00 required at the time of room reservation is applied to the total cost. Full payment of room and board is required at the time of registration. However, where a hardship would result from complete prepayment, special arrangements may be made for installment payments. Such a request must be approved by the Dean of Men or the Dean of Women. When paying on the installment plan, \$113.00 is due at the beginning of each six-week period, the three payments totaling \$339.00. Penalty for all late payments, whether by semester or by installments is \$5.00.

LABORATORY AND SHOP COSTS

In general, all materials for laboratories and shops are furnished. However, in a few courses the student furnishes material for a project which is to be his own personal property when completed.

PART-TIME STUDENTS

All resident students taking courses aggregating seven or fewer semester hours of credit shall be classified as part-time students. Those students taking courses aggregating fewer than eight hours of credit shall pay an incidental fee of \$12.00 per credit (resident student) or \$30.00 per credit (nonresident student). The textbook fee for part-time students is \$.50 per hour of credit.

SPECIAL FEES

Diploma Fee	-----	\$7.50
Special Examination Fee (taken in special cases only)	-----	2.00
Commencement regalia rental based on cost.		

REFUNDS ON FEES

Withdrawal during first and second weeks	80%
Withdrawal during third week	60%
Withdrawal during fourth week	40%
Withdrawal during fifth week	20%
Over five weeks	No refund

Students boarding in the dormitories are entitled to a refund of whatever amount has been advanced for board beyond the date when notice of withdrawal is received.

Refund for advance payment of room rent in the dormitories is allowed from the date when the room is again rented. Effort is made to get an occupant at the earliest date possible.

FINANCIAL AIDS FOR STUDENTS

Financial aids are provided to assist students who might otherwise find college attendance difficult or impossible. These aids include scholarships, grants-in-aid, loans, and part-time employment. The type and amount of aid are determined by the student's financial need, scholastic promise, health, vocational goal, special talent, character, and personality.

APPLICATION FOR FINANCIAL AID

To obtain financial assistance, new students must submit both application for admission and application for financial aid forms. Students who have matriculated previously file only the application for financial aid form. These forms may be obtained from the Student Personnel Office. A brief description of each type of assistance follows.

SCHOLARSHIPS AND GRANTS-IN-AID

LEGISLATIVE SCHOLARSHIPS

Wisconsin Statutes authorize the granting of scholarships to high school graduates of public or private schools under two types of conditions:

1. Class A scholarships go to students who rank first in scholarship in a Wisconsin high school enrolling fewer than 250 students, who rank first and second in high school enrolling 250 to 750 students, and who rank first, second, and third in high schools enrolling 750 or more students. In case the person or persons eligible for scholarships under these conditions do not elect to enroll at a Wisconsin State College, the scholarship may be granted to graduates who are the next highest in scholastic rank.
2. Class B scholarships go to students who graduate from Wisconsin public or private high schools and who have good scholastic promise, financial need, and leadership ability. The number of the scholarships granted under this second category is limited to fifteen per cent of the previous year's total freshman enrollment.

In both types of scholarships, the award equals the amount of the incidental fee, only freshman students qualify, and the second semester's grant requires at least a C average during the first semester of attendance.

OTHER LEGISLATIVE SCHOLARSHIPS

State grants are available for out of state, foreign, vocational rehabilitation, American Indian, blind, and deaf students. Needy and worthy non-resident students may have the out-of-state tuition fee waived. The number of these waivers is limited to eight per cent of the number of nonresident students enrolled during the preceding year. Other students listed in the above heading may also be granted scholarships equivalent to the incidental fee, and in the case of foreign students the nonresident tuition fees as well. Indians may also receive some assistance for board and room. High scholarship, financial need, and qualities of leadership are required of all recipients.

GENERAL MOTORS SCHOLARSHIP PROGRAM

Stout is one of about 450 colleges which has been selected by General Motors to participate in its scholarship program. One award is made annually to an outstanding freshman. The award will be renewed for the

other undergraduate years provided the student continues to meet the highest standards. If the holder of the award withdraws, or fails to maintain a record in line with the highest standards, the scholarship is awarded to another qualified classmate. The amount of the award will range from an honorary award of \$200.00 up to an award of \$2,000.00 per year, depending upon the financial need of the individual.

OTHER SCHOLARSHIPS AND GRANTS

Scholarships and grants provided by organizations, businesses, and individuals with a special interest in Stout students. Due to the generosity and loyalty of many organizations, businesses, and individuals a number of scholarships, grants, and loans become available to Stout students. Prospective students or students currently enrolled do not apply for specific scholarships, grants, or loans, as above stated, but are selected for the most appropriate award on the basis of the information provided on an application for financial aid form which is available upon request. Usually only one scholarship or grant is given to one person. These who have made funds available for student financial aid include:

- Alex's Pizza House. Two scholarships; open to all classes.
- American Federation of Labor Scholarship. Recipient selected by Wisconsin State Council of the United Brotherhood of Carpenters and Joiners of America.
- The Automobile Manufacturers Association Award. A \$2,500.00 scholarship for automotive mechanics majors.
- The Catherine Skeels Scholarship Fund. Selected from home economics juniors.
- The Dora Rude Award Fund. A home economics junior selected annually for a scholarship.
- The Dunn County Home Economics Demonstration Council Scholarship. A \$100.00 scholarship limited to a Dunn County resident who wishes to study home economics; selected by the organization.
- Elgin State Bank, Elgin, Minnesota. A \$300.00 scholarship for a resident of the Elgin School District.
- Farmers State Bank, Eyota, Minnesota. A \$300.00 scholarship for a resident of the Dover-Eyota School District.
- George Wilson LaPointe, Jr. Memorial Scholarship Fund. Woodworking students given preference.
- The Gisholt John A. Johnson Foundation of Madison, Wisconsin. A \$500.00 scholarship and loans to metal majors.
- Leonard M. Hovild Fund. A legacy by a 1916 alumnus.
- Margaret Micheels Memorial Award. A scholarship for an American student who provides meritorious service to foreign students.
- Mary J. Eichelberger Scholarship. Income used for various types of aid.

The Menomonie Branch of the American Association of University Women.
A \$50.00 scholarship available to an upperclass woman selected by the organization.

Peter F. Christianson Memorial Fund. A \$400.00 fund for emergency loans.

Phi Omega Beta Scholarship. Scholarships for freshmen.

Sandy Lee Scholarship, Norman K. Lavin Company. Two \$125.00 clothing and textile scholarships annually.

Stout Alumni Association. Several scholarships.

Stout Faculty Wives. A scholarship.

Thomas F. Fleming Prize. A \$50.00 Annual Essay Award.

Wisconsin Home Agents Association. A home economics scholarship.

Yates-American Machinery Company, Beloit, Wisconsin. A \$145.00 scholarship to a junior or senior majoring in woodworking.

Menomonie Business Firms, Individuals, and Service Organizations.

Each provides an annual scholarship of at least \$100.00 to a freshman who is recommended by the scholarship committee, or provides \$100.00 to make \$1000.00 of NDEA loan funds available to worthy students. Contributors are: Badger State Yard, Bank of Menomonie, Ben Franklin Store, Dunn County Electric Cooperative, First National Bank, Jones Menomonie Pharmacy, Knapp Creamery Company, Alex Kostas of Alex's Pizza, Kraft State Bank, Lee's Drug Store, Lions Club, M & L Motor Supply, Ole Madson of Madson Jewelers, McClellan's Shop, Menomonie Brick Company, Menomonie Chamber of Commerce, Menomonie Clinic, Menomonie Farmers Union, Henry R. Petryk, Robert L. Pierce, Red Cedar Clinic, Rotary Club, Sanna Daries Foundation, Clare Talen, Van's Appliance Store.

STUDENT LOANS

In addition to loans mentioned below, a number of private sources provide student loans. Application for a student loan should be made at the Student Personnel Office, 110 Harvey Hall.

The Fred A. Fischer Loan Fund. The parents and friends of Fred A. Fischer, a Stout alumnus who died in service in 1952, have established a loan fund.

The Handy Fund. A contribution from Robert J. Handy, father of a Stout graduate, has been designated as an emergency fund to assist students.

National Defense Student Loan Program. Congress has provided funds to establish loan funds for needy students. Preference must be given to students who later teach in public elementary and secondary schools and who have superior scholarship records.

State of Wisconsin Student Loan Fund. The State of Wisconsin makes loans to needy resident students in state educational institutions of college rank.

The Stout State College Loan Fund. Part of the legacy of Mrs. Mary J. Eichelberger has been used to establish a student loan fund.

Stout Student Association Emergency Loan Fund. Emergency loans are provided for students who need small sums for immediate use. Applications are available in the S.S.A. office.

PART-TIME EMPLOYMENT

Many students receive part-time employment on campus in the cafeteria, library, building maintenance department, student center, printshop, offices needing clerical assistants, and dormitories. Other students are assisted in finding off-campus jobs. Application should be made at the Student Personnel Office, 110 Harvey Hall.

STUDENT PERSONNEL SERVICES

A major aim of Stout State College is to assist students in making maximum progress toward suitable, achievable, and satisfying educational, vocational, personal, and social goals. To facilitate the accomplishment of this aim, the non-instructional and non-business areas of the college administration are organized into a program of Student Personnel Services.

These services include selection and retention of students, orientation of new students, personalized registration, counseling, testing, health services, housing, food services, personnel records, co-curricular activities, financial aid (including part-time employment), remediation of scholastic deficiencies, stimulation of student religious activities, research, placement and follow-up. The personnel program seeks to supplement the institutional offerings by providing both group and individual experiences which focus attention on self-understanding, personal growth, and wholesome citizenship in a democratic setting. Every possible effort is made to foster a friendly democratic atmosphere in all personnel work so that personal integrity and group morale will be preserved.

Freshman Week

A major portion of the opening week of each school year is devoted to orientation activities for the students who enter the college for the first time. During this period, these students follow a schedule which acquaints them with the college as an intellectual community, the campus and its buildings, the city of Menomonie, their fellow students and faculty members, their class schedules, the church of their choice, and the customs and aims of Stout State College. Among the happiest and most worthwhile phases of Freshman Week are the contacts that new students make with each other and with the upperclassmen and the staff members. Students who enter wholeheartedly into this program will find themselves ready to begin effective and happy participation in college life. A testing program is also included during Freshman Week so that the counselors may assist these students more effectively.

Advisers

The foundation of the student personnel work is laid in the day-to-day contacts between teachers and students. The Deans of the Schools of Home Economics and Applied Science and Technology administer the programming of students. The deans are assisted by faculty advisers.

At entrance, each girl is assigned to a faculty member who serves as her adviser during her stay at the college. The adviser assists the student with the preparation of a program of studies prior to each registration period, as

well as with other problems. Referrals are made to the Dean of the School of Home Economics, or to the Counseling Center, if the student and the adviser so decide.

Men students are assigned to advisers for the first two years of college. At the end of the sophomore year, or as soon as the student has selected his areas of concentration, he is assigned a faculty adviser in the field of his major interest. All advisers assist their advisees with programming prior to each registration period. Referrals are made to the Dean of the School of Applied Science and Technology or to the Counseling Center whenever the need for additional counseling develops.

Counseling and Testing Center

A counseling and testing service is maintained for students who desire assistance with educational, vocational, and related matters. Students are invited to seek this service if they desire to improve their self-understanding, to examine their cumulative records, to increase their scholastic effectiveness, to study the feasibility of their educational and vocational goals, or to obtain help with other matters. Aptitude, achievement, interest, and personality tests are administered to students without charge if students seek and need such service.

Social Life

The Dean of Men and the Dean of Women cooperate with the Student Senate and the Stout Student Association officers in planning and administering the social program of the college. Students who desire assistance in regard to housing, social adjustment, participation in activities, orientation to college customs and regulations, and similar matters are invited to seek the help of these deans.

Financial Aid

The Dean of Men maintains an employment service for students who seek part-time employment. All applications for on-campus employment are processed by him, and he also maintains contact with off-campus employers of students. Loans to students are processed from his office. Students who need funds for emergency purposes should also consult him.

Veterans Service

Special assistance is given veterans by the Dean of the School of Industrial Education and by the Registrar. These offices provide veterans with current information on veterans' affairs and maintain liaison between the Veteran's Administration and the college.

International Student Advisement Program

Students from foreign countries attend our college in substantial numbers. As a majority of these students are men, the Dean of the School of Applied Science and Technology, and a faculty advisor appointed by him, assume much of the responsibility for the administration, orientation, and general supervision of foreign students programs. Other faculty members assume

responsibility for the social program for foreign students, for the administration of appropriate language tests, and for housing. The International Relations Club provides an opportunity for foreign students to contribute to cultural exchange opportunities and become well acquainted with students. Menomonic organizations, as well as groups in neighboring communities, invite foreign students to appear before their membership and to be guests in the homes of members.

Placement

During the senior year, all students complete records for use by the Placement Chairman. The placement office is maintained to serve seniors, graduates, and employers. This service is dependent upon the cooperation of the graduates in maintaining up-to-date credentials. Due to its national reputation in home economics and industrial arts, coupled with the critical shortage of professional personnel in most of the areas for which curricula are offered, Stout State College has maintained an enviable placement record. The Placement Chairman brings to the attention of properly qualified seniors and graduates, vacancies which employers report, realistic information regarding trends in supply and demand, and data about salaries and conditions of employment.

STUDENT ACTIVITIES

Stout State College offers a wide range of student activities. The college encourages all students to participate in campus organizations, for these contribute to better citizenship and to a more satisfying personal, family, and social life.

All students are members of the Stout Student Association. Within this organization there is a strong student government, which consists of three parts: (1) Four executive offices, elected by the student body; (2) The Student Senate, a policy-making group consisting of fifteen students and three faculty members; and (3) The student court to handle disciplinary problems.

The Memorial Student Center

The Board of Governors of the Memorial Student Center has general supervision of the center, is concerned with policy-making, and cooperates in the development of activities at the center.

The Board is composed of representatives of the four undergraduate classes, the graduate division, the Interfraternity Council, Panhellenic Council, and the Student Senate. The Dean of Men and Dean of Women are also members. Ex officio members include the President of the S.S.A. and the Manager of the Student Center.

Publications

The Stoutonia, the student weekly newspaper, ranks high among college newspapers. It offers opportunity for experience in printing as well as writing, photography, editing, and advertising. *The Tower*, the college annual, is also a student product. Both publications are financed by S.S.A. funds. These publications are distributed to all students, as members of the S.S.A.

Athletics

Intercollegiate athletics are under the direction of the faculty committee on athletics. Stout State College is a member of the Wisconsin State College Athletic Conference and is subject to the rules of this conference. The college is a member of the National Association of Intercollegiate Athletics and is committed to the enforcement of its rules and regulations. The college is represented in intercollegiate teams in football, basketball, baseball, golf, tennis, and wrestling.

The athletic program at Stout State College exists because of the contributions it makes to the total educational program. For the participant it provides general educational values and constitutes a laboratory for the preparation of future high school athletic coaches.

The "S" Club is a campus organization for men who have earned letters in intercollegiate sports.

Recreation and Sports

A varied program in intramural sports is offered for the men. The Women's Recreation Association sponsors a similar program for women. The Rifle Club, the Ski Devils, and Synchronized Swimmers offer opportunities for all students who are interested in other active sports.

Dramatics

The Zeta Beta Chapter of Alpha Psi Omega, a national dramatic fraternity offers several plays a year. Membership includes those who participate in the backstage production as well as in acting.

Music

The Stout Symphonic Singers, a combined choral and instrumental concert group, has attained recognition through its concerts in many states. The glee club, bands, and orchestra also add greatly to the musical opportunities of the school. Several concerts are presented each year.

Professional and Educational Clubs

Organizations specifically for fifth-year students are the Graduate Men's Club and the Graduate Women's Club. The Arts and Crafts Club, Dietetic Club, Home Economics Club, Metals Guild, Radio-Electronics Club, Stout Typographical Society, and Student National Education Association offer opportunities for professional growth.

International Contacts

The International Relations Club, a student organization open to students and faculty, offers an opportunity to discuss current world problems. Stout has in regular attendance many students from other countries who contribute to the exchange of ideas through the activities of the club.

The People-to-People program, introduced in the spring of 1963 under the auspices of the Stout Student Association, is an inter-campus movement designed to help orient foreign students to American life and to help American students develop contacts with visiting students more easily.

Other Interest Groups

The 4-H club and the Young Democrats present opportunities for experience in those specific fields.

Social Fraternities and Sororities

The social fraternities and sororities on the Stout campus contribute to the social life and experiences of their members and of the college as a whole. The sororities are Alpha Phi, Alpha Sigma Alpha, Delta Zeta, and

Sigma Sigma Sigma; the fraternities are Chi Lambda, Delta Kappa, Phi Omega Beta, Phi Sigma Epsilon, and Sigma Tau Gamma.

Service

Alpha Phi Omega is a national service fraternity for men interested in scouting. The Young Women's Christian Association and Mid-Termers are service and social organizations for the women on campus and the mid-year entrants, respectively.

Religious Organizations

Student groups from the various churches in Menomonie are organized and carry on active programs in their respective churches. They are the Baptist College Fellowship, Canterbury Club (Episcopal), Chi Alpha (Full Gospel Tabernacle), Gamma Delta (Lutheran), Lutheran Student Association, Newman Club (Roman Catholic), Wesley Fellowship (Methodist), and United Campus Christian Fellowship (Congregational, Evangelical United Brethren, and Methodist). The local interdenominational group, affiliated with the Inter-Varsity Christian Fellowship, is Stout Christian Fellowship.

The Inter-Religious Council consists of three representatives from each of the above groups. Its aims are to stimulate religious development, coordinate student religious activities, and promote an understanding among clergymen, faculty members, students, and parents of the relationship that should exist between higher education and religion in a democratic society. It is the policy of the college to respect the religious preferences of all students and yet to prevent conflict with the principles of separation of church and state, and of academic freedom. Encouragement, not sponsorship, is the essence of the program.

SUMMER SESSION

The 59th and the 60th summer sessions of Stout State College will be held during the summers of 1964 and 1965. The summer sessions open two weeks after the close of the second semester in June.

The regular summer session is eight weeks in length. This enables a graduate student to fulfill requirements for a Master of Science degree in four summer sessions. The summer session bulletin issued in April gives full information on courses and schedule.

Summer session classes are designed to meet the needs of various groups of people. Former students and graduates have an excellent opportunity for taking advanced work. Both graduate and undergraduate work will be offered. Supervisors and teachers of industrial education or home economics can strengthen their work in techniques or in the field of education. All persons interested in specific studies related to work in industrial and homemaking courses will find much of interest in the summer session schedule. The Wisconsin State Board of Vocational and Adult Education through the use of federal teacher training funds is cooperating with Stout State College in the preparation of teachers for schools of vocational and adult education. The summer session schedule carries an excellent range of courses required for vocational classification.

Special lectures and conferences are included in the summer session program. It has been the policy of the college to secure special speakers particularly well qualified to handle the larger social problems of the present time. Special emphasis is given to the relationships and responsibilities which home economics and industrial education teachers have in the solution of these problems.

Credit granted for courses taken during the summer session will apply on course requirements where such courses are in the curriculum leading to the degree. The time assigned to summer session courses is increased in sufficient amounts to permit students to carry the courses for the same credit as in the regular session.

The April issue of the *Stout State College Bulletin* is the annual summer session bulletin. This contains general information on the summer session, description of courses, and the summer session class schedule including both undergraduate and graduate work. It will be sent on request.

COURSES OF STUDY

HOME ECONOMICS

Objectives of the School of Home Economics

The School of Home Economics endeavors to help its students attain the following objectives:

1. Values which give meaning and direction in the selection of goals for personal, family, and community living.
2. Good taste, judgment, and discernment in the selection and use of consumer goods and services including housing, food, clothing, and other aspects of family living.
3. Abilities to enrich personal and family life through the appreciation and use of the arts, sciences, and humanities.
4. An appreciation of the family as the background for optimum physical, mental, emotional, social, and spiritual development for all age groups in the family.
5. An understanding of some of the problems which families may encounter in the achievement of their individual and family goals.
6. An awareness of various human and material resources such as abilities, attitudes, knowledge, material goods, services, time, energy, and money which individuals and families possess.
7. Greater ability and confidence in making and carrying out intelligent decisions in managing personal, family, and community resources for the achievement of personal, family, or community goals.
8. Ability to think critically, analytically, and creatively in the solution of problems relating to family and community living.
9. Ability to apply principles which make for proficiency in the performance of homemaking tasks so that they easily and effectively contribute to individual and family values and goals.
10. Increased ability and willingness to assume responsibilities in immediate, national, and world communities.
11. A philosophy in the light of current trends in basic education with which professional education in home economics must be coordinated.

General Information

The field of home economics is concerned with problems of home and family life, and its studies are based upon an understanding of the natural and social sciences and the humanities. The offerings in the School of Home Economics are planned to meet the student needs in family and community living and to offer a worthwhile training in the many professional fields open in home economics. Graduates of this college are prepared to fill pos-

itions in the teaching field, hospital dietetics, institution management, commercial demonstration work, agriculture extension service, and a wide range of home economics positions in business.

Curricula in the School of Home Economics meet the requirements for the degree of Bachelor of Science with a major in Home Economics Education or Home Economics. They also permit the meeting of requirements for teachers' licenses, vocational certification, or requirements of the American Dietetic Association and the National Restaurant Association. Students may specialize in dietetics, institution management, clothing and textiles, or a general program planned individually for students interested in other areas of home economics.

Affiliation with the Merrill-Palmer Institute

Stout State College carries an affiliation with the Merrill-Palmer Institute in Detroit. The Merrill-Palmer Institute is a private institution with a program devoted to human development and human relations.

Sophomore students who are interested in home economics education, family relations and child development may make application to study at the institute during their junior year. A faculty committee selects the students for this program on the basis of scholarship and readiness for intensive study. The Dean of the School of Home Economics administers the program.

CURRICULA IN HOME ECONOMICS

General Requirements

1. Completion of 128 semester hours.
2. A major of 40 semester hours in home economics. Art 106 and Art 334 may be included.
3. Minors as described under each curriculum.

HOME ECONOMICS EDUCATION—PLAN I

Broad field major of 54 semester hours in home economics with no minor.

FIRST YEAR

	Sem. Hrs.
Art 106, Fundamentals of Design	3
Education 123, General Psychology	3
English 102a, English Composition	3
English 102b, English Composition	3
Home Economics 100, Orientation	0

Home Economics 102, Fundamentals of Clothing	3
Home Economics 114, Food Preparation	5
Home Economics 220, Clothing Selection	2
Physical Education 128a, Physical Education	1
Physical Education 128b, Physical Education	1
Science 122, General Biology	3
Science 214, Physiology and Anatomy	3
Speech 106, Fundamentals of Speech	2

SECOND YEAR

Art 334, Home Furnishing	3
Education 222, Principles of Secondary Education	2
Choose One:	
English 216, English Literature (3)	
English 348, American Literature (3)	3
Home Economics 212, Family Nutrition	3
Home Economics 218, Clothing	3
Home Economics 230, Food Preparation	3
Home Economics 315, Textiles	3
Home Economics 318, Family Health and Home Nursing	2
Physical Education 228a, Physical Education	1
Physical Education 228b, Physical Education	1
Science 115, Inorganic Chemistry	5
Social Science 201, General Economics	3

THIRD YEAR

Art 206, Art Appreciation	2
Education 303, Educational Psychology	2
Education 310, Introduction to Teaching Home Economics	2
English 346, Expository Writing	3
Home Economics 308, Meal Management	3
Home Economics 317, Consumer Information	3
Home Economics 334, Personality Growth and Development of the Child	3
Home Economics 428, Family Economics	2
Social Science 309, General Sociology	3
Social Science 326, Marriage and the Family	2
Electives	7

FOURTH YEAR

*Education 408, Student Teaching of Home Economics	8
*Education 427, Methods of Teaching	4
*Education 441, Education Evaluation	2
Home Economics 333, Home Equipment and Applied Physics	3
Home Economics 403, Home Management	4
Home Economics 424, Principles and Practices of Child Guidance	2
Choose One:	
Social Science 407, History of the Americas (3)	
Social Science 410, Modern World (3)	3
Electives	6

No more than a total of six elective credits may be selected in Home Economics or Art.

*Student teaching may be taken either semester of the senior year. In order that the student may be free to teach in an off-campus school during six weeks of the semester, the courses starred above must be taken concurrently. Application for student teaching must be made by the second semester of the third year. Candidates must have at least a 2.3 grade point average in order to qualify for student teaching.

Students who wish to qualify as vocational teachers must elect Education 401, Guidance (2 cr.) and Education 402, Philosophy of Vocational Education (2 cr.).

HOME ECONOMICS EDUCATION—PLAN II

One 22 semester hour academic minor in art, biology, chemistry, English, history, journalism, mathematics, physics, sociology, or speech. Requirements for these minors are listed in the course descriptions of each department.

FIRST YEAR

	Sem. Hrs.
Art 106, Fundamentals of Design	3
Education 123, General Psychology	3
English 102a, English Composition	3
English 102b, English Composition	3
Home Economics 100, Orientation	0
Home Economics 102, Fundamentals of Clothing	3
Home Economics 114, Food Preparation	5
Home Economics 220, Clothing Selection	2
Physical Education 128a, Physical Education	1
Physical Education 128b, Physical Education	1
Science 122, General Biology	3
Science 214, Physiology and Anatomy	3
Speech 106, Fundamentals of Speech	2

SECOND YEAR

Art 334, Home Furnishing	3
Education 222, Principles of Secondary Education	2
Choose One:	
English 216, English Literature (3)	
English 348, American Literature (3)	3
Home Economics 212, Family Nutrition	3
Home Economics 218, Clothing	3
Home Economics 315, Textiles	3
Home Economics 318, Family Health and Home Nursing	2
Physical Education 228a, Physical Education	1

Physical Education 228b, Physical Education	1
Science 115, Inorganic Chemistry	5
Social Science 201, General Economics	3
Electives	3

THIRD YEAR

Education 303, Educational Psychology	2
Education 310, Introduction to Teaching Home Economics	2
English 346, Expository Writing	3
Home Economics 308, Meal Management	3
Home Economics 317, Consumer Information	3
Home Economics 334, Personality Growth and Development of the Child	3
Social Science 309, General Sociology	3
Social Science 326, Marriage and the Family	2
Electives	11

FOURTH YEAR

*Education 408, Student Teaching of Home Economics	8
*Education 427, Methods of Teaching	4
*Education 441, Education Evaluation	2
Home Economics 403, Home Management	4
Home Economics 424, Principles and Practices of Child Guidance	2
Choose One:	
Social Science 407, History of the Americas(3)	
Social Science 410, Modern World (3)	3
Electives	9

*Student teaching may be taken either semester of the senior year. In order that the student may be free to teach in a off-campus school during six weeks of the semester, the courses starred above must be taken concurrently. Application for student teaching must be made by the second semester of the third year. Candidates must have at least a 2.3 grade point average in order to qualify for student teaching.

Students who wish to qualify as vocational teachers must elect Education 401, Guidance (2 cr.) and Education 402, Philosophy of Vocational Education (2 cr.).

HOME ECONOMICS—DIETETICS

One 22 semester hour academic minor in art, biology, chemistry, English, history, mathematics, physics, sociology, speech, or journalism (technical writing for business and industry). Requirements for these minors are listed under the course descriptions of each department.

Or

Two 15 semester hour academic concentrations. These concentrations and the course requirements are listed following the home economics curricula.

FIRST YEAR

	Sem.	Hrs.
Art 106, Fundamentals of Design	3	
Education 123, General Psychology	3	
English 102a, English Composition	3	
English 102b, English Composition	3	
Home Economics 100, Orientation	0	
Home Economics 102, Fundamentals of Clothing	3	
Home Economics 114, Food Preparation	5	
Home Economics 220, Clothing Selection	2	
Physical Education 128a, Physical Education	1	
Physical Education 128b, Physical Education	1	
Science 122, General Biology	3	
Science 214, Physiology and Anatomy	2	
Speech 106, Fundamentals of Speech	2	

SECOND YEAR

	Sem.	Hrs.
Choose One:		
English 216, English Literature (3)		
English 348, American Literature (3)	3	
Home Economics 212, Family Nutrition	3	
Home Economics 230, Food Preparation	3	
Home Economics 315, Textiles	3	
Physical Education 228a, Physical Education	1	
Physical Education 228b, Physical Education	1	
Science 115, Inorganic Chemistry	5	
Science 208, Organic Chemistry	4	
Science 306, General Bacteriology	3	
Social Science 201, General Economics	3	
Electives	3	

THIRD YEAR

	Sem.	Hrs.
Education 303, Educational Psychology	2	
English 346, Expository Writing	3	
Home Economics 308, Meal Management	3	
Home Economics 328, Institution Administration	3	
Home Economics 334, Personality Growth and Development of the Child	3	
Science 322, Biochemistry	3	
Science 362, Advanced Physiology	3	
Social Science 309, General Sociology	3	
Social Science 326, Marriage and the Family	2	
Electives	7	

FOURTH YEAR

	Sem.	Hrs.
Education 320, Methods of Teaching Home Economics	2	
Education 430, Industrial Psychology	2	
Home Economics 310, Nutrition and Dietetics	3	

Home Economics 403, Home Management	4
Home Economics 418, Diet in Disease	3
Home Economics 438, Experimental Food	3
Home Economics 441, Food Service Accounting	3
Home Economics 452, Institution Food Preparation	3
Home Economics 454, Institution Food Purchasing	2

HOME ECONOMICS — INSTITUTION MANAGEMENT

One 22 semester hour academic minor in art, biology, chemistry, English, history, mathematics, physics, sociology, speech, or journalism (technical writing for business and industry). Requirements for these minors are listed under the course descriptions of each department.

Or

Two 15 semester hour academic concentrations. These concentrations and the course requirements are listed following the home economics curricula.

FIRST YEAR

	Sem. Hrs.
Art 106, Fundamentals of Design	3
Education 123, General Psychology	3
English 102a, English Composition	3
English 102b, English Composition	3
Home Economics 100, Orientation	0
Home Economics 102, Fundamentals of Clothing	3
Home Economics 114, Food Preparation	5
Home Economics 220, Clothing Selection	2
Physical Education 128a, Physical Education	1
Physical Education 128b, Physical Education	1
Science 122, General Biology	3
Science 214, Physiology and Anatomy	3
Speech 106, Fundamentals of Speech	2

SECOND YEAR

	Sem. Hrs.
Choose One:	
English 216, English Literature (3)	
English 348, American Literature (3)	3
Home Economics 212, Family Nutrition	3
Home Economics 230, Food Preparation	3
Home Economics 315, Textiles	3
Physical Education 228a, Physical Education	1
Physical Education 228b, Physical Education	1
Science 115, Inorganic Chemistry	5
Science 208, Organic Chemistry	4
Science 306, General Bacteriology	3

Social Science 201, General Economics	3
Electives	3

THIRD YEAR

	Sem. Hrs.
Education 303, Educational Psychology	2
English 346, Expository Writing	3
Home Economics 308, Meal Management	3
Home Economics 317, Consumer Information	3
Home Economics 328, Institution Administration	3
Home Economics 334, Personality Growth and Development of the Child	3
Social Science 309, General Sociology	3
Social Science 326, Marriage and the Family	2
Electives	10

FOURTH YEAR

	Sem. Hrs.
Education 320, Methods of Teaching Home Economics	2
Education 430, Industrial Psychology	2
Home Economics 403, Home Management	4
Home Economics 438, Experimental Food	3
Home Economics 441, Food Service Accounting	3
Home Economics 452, Institution Food Preparation	3
Home Economics 454, Institution Food Purchasing	2

Choose One:

Home Economics 300, Applied Institution Management (3)

Home Economics 463, Institution Management Problems (3) ---- 3

Students who wish to qualify for internships in dietetics or institution management and students who wish to qualify for apprenticeship training under the National Restaurant Association should follow the dietetic curriculum.

HOME ECONOMICS — CLOTHING AND TEXTILES

One 22 semester hour academic minor in art, biology, chemistry, English, history, mathematics, physics, sociology, speech, or journalism (technical writing for business and industry). Requirements for these minors are listed under the course descriptions of each department.

Or

Two 15 semester hour academic concentrations. These concentrations and the course requirements are listed following the home economics curricula.

FIRST YEAR

	Sem. Hrs.
Art 106, Fundamentals of Design	3
Education 123, General Psychology	3
English 102a, English Composition	3
English 102b, English Composition	3
Home Economics 100, Orientation	0

Home Economics 102, Fundamentals of Clothing	3
Home Economics 114, Food Preparation	5
Home Economics 220, Clothing Selection	2
Physical Education 128a, Physical Education	1
Physical Education 128b, Physical Education	1
Science 122, General Biology	3
Science 214, Physiology and Anatomy	3
Speech 106, Fundamentals of Speech	2

SECOND YEAR

	Sem. Hrs.
Art 334, Home Furnishing	3
Choose One:	
Education 216, English Literature (3)	
Education 348, American Literature (3)	3
Home Economics 212, Family Nutrition	3
Home Economics 218, Clothing	3
Home Economics 315, Textiles	3
Physical Education 228a, Physical Education	1
Physical Education 228b, Physical Education	1
Science 115, Inorganic Chemistry	5
Social Science 201, General Economics	3
Electives	7

THIRD YEAR

	Sem. Hrs.
Education 346, Expository Writing	3
Home Economics 308, Meal Management	3
Home Economics 317, Consumer Information	3
Home Economics 325, Principles of Merchandising	3
Home Economics 334, Personality Growth and Development of the Child	3
Home Economics 413, Flat Pattern Design	2
Home Economics 415, Economics of Family Clothing	3
Science 208, Organic Chemistry	4
Social Science 309, General Sociology	3
Social Science 326, Marriage and the Family	2
Electives	3

FOURTH YEAR

	Sem. Hrs.
Choose at least one:	
Education 360, Audio-Visual Education (2)	
Education 430, Industrial Psychology (2)	
Education 479, Public Relations (2)	2
Home Economics 403, Home Management	4
Home Economics 471, History of Costume	3
Home Economics 473, Clothing and Textile Industry	3

Science 306, General Bacteriology	3
Choose one:	
Social Science 407, History of the Americas (3)	
Social Science 410, Modern World (3)	3
Electives	14

HOME ECONOMICS — GENERAL

One 22 semester hour academic minor in art, biology, chemistry, English, history, mathematics, physics, sociology, speech, or journalism (technical writing for business and industry). Requirements for these minors are listed under the course descriptions of each department.

Or

Two 15 semester hour academic concentrations. These concentrations and the course requirements are listed following the home economics curricula.

FIRST YEAR

	Sem. Hrs.
Art 106, Fundamentals of Design	3
Education 123, General Psychology	3
English 102a, English Composition	3
English 102b, English Composition	3
Home Economics 100, Orientation	0
Home Economics 102, Fundamentals of Clothing	3
Home Economics 114, Food Preparation	5
Home Economics 220, Clothing Selection	2
Physical Education 128a, Physical Education	1
Physical Education 128b, Physical Education	1
Science 122, General Biology	3
Science 214, Physiology and Anatomy	3
Speech 106, Fundamentals of Speech	2

SECOND YEAR

	Sem. Hrs.
Art 334, Home Furnishing	3
Choose One:	
English 216, English Literature (3)	
English 348, American Literature (3)	3
Home Economics 212, Family Nutrition	3
Home Economics 218, Clothing	3
Home Economics 315, Textiles	3
Home Economics 318, Family Health and Home Nursing	2
Physical Education 228a, Physical Education	1
Physical Education 228b, Physical Education	1
Science 115, Inorganic Chemistry	5
Social Science 201, General Economics	3
Electives	5

THIRD YEAR

	Sem. Hrs.
English 346, Expository Writing -----	3
Home Economics 308, Meal Management -----	3
Home Economics 317, Consumer Information -----	3
Home Economics 334, Personality Growth and Development of the Child -----	3
*Home Economics -----	6
Social Science 309, General Sociology -----	3
Social Science 326, Marriage and the Family -----	2
Electives -----	9

FOURTH YEAR

	Sem. Hrs.
Home Economics 403, Home Management -----	4
Home Economics 424, Principles and Practices of Child Guidance -----	2
Home Economics 428, Family Economics -----	2
*Home Economics -----	6
Science 442, Community Hygiene -----	2
Choose One:	
Social Science 407, History of the Americas (3) -----	
Social Science 410, Modern World (3) -----	3
Electives -----	13

*During the third and fourth years the student must complete six additional semester hours of credit in each of any two of the following areas: Clothing and Textiles, Food and Nutrition, Art.

HOME ECONOMICS — GENERAL
WITH OPTION IN FOOD AND NUTRITION
WITH EMPHASIS IN TECHNICAL WRITING
FOR HOME ECONOMICS

One 22 semester hour academic minor in art, biology, chemistry, English, history, mathematics, physics, sociology, speech, or journalism (technical writing for business and industry). Requirements for these minors are listed under the course descriptions of each department.

Or

Two 15 semester hour academic concentrations. These concentrations and the course requirements are listed following the home economics curricula.

FIRST YEAR

	Sem. Hrs.
Art 106, Fundamentals of Design -----	3
Education 123, General Psychology -----	3
English 102a, English Composition -----	3
English 102b, English Composition -----	3
Home Economics 100, Orientation -----	0
Home Economics 102, Fundamentals of Clothing -----	3

Home Economics 114, Food Preparation	5
Home Economics 220, Clothing Selection	2
Physical Education 128a, Physical Education	1
Physical Education 128b, Physical Education	1
Science 122, General Biology	3
Science 214, Physiology and Anatomy	3
Speech 106, Fundamentals of Speech	2

SECOND YEAR

Choose One:

English 216, English Literature (3)	
English 348, American Literature (3)	3
English 306, Reporting and News Writing	2
Home Economics 212, Family Nutrition	3
Home Economics 230, Food Preparation	3
Home Economics 315, Textiles	3
Physical Education 228a, Physical Education	1
Physical Education 228b, Physical Education	1
Science 115 Inorganic Chemistry	5
Science 208, Organic Chemistry	4
Social Science 201, General Economics	3
Electives	4

THIRD YEAR

English 346, Expository Writing	3
English 410, Writing and Selling Feature Articles	2
Home Economics 300, Applied Institution Management	3
Home Economics 308, Meal Management	3
Home Economics 317, Consumer Information	3
Home Economics 333, Home Equipment	3
Home Economics 334, Personality Growth and Development of the Child	3
Science 208, Organic Chemistry	4
Social Science 309, Sociology	3
Social Science 326, Marriage and the Family	2
Electives	3

FOURTH YEAR

Education 430, Industrial Psychology	2
Education 479, Public Relations	2
English 415, Technical Writing for Home Economics	3
Home Economics 400, Demonstration Techniques	2
Home Economics 403, Home Management	4
Home Economics 438, Experimental Food	3
Science 306, General Bacteriology	3
Choose One:	
Social Science 407, History of the Americas (3)	
Social Science 410, Modern World (3)	3

Speech 470, Radio and TV Workshop	2
Electives	7

Fifteen Credit Academic Concentrations for Home Economics

ART

Fifteen credits selected from the offerings in Art.

ENGLISH AND SPEECH

Fifteen credits selected from the offerings in English and Speech. At least four credits must be chosen from each area.

JOURNALISM: TECHNICAL WRITING FOR BUSINESS AND INDUSTRY

Required courses are E. 306 Reporting and News Writing, E. 410 Writing and Selling Feature Articles, E. 415 Technical Writing for Home Economics, E. 425 Copy Editing and Preparation, I.E. 117 Printing, I.E. 205 Elementary Photography, I.E. 361 Printing Design.

MATHEMATICS

Fifteen credits selected from the offerings in Mathematics.

SCIENCE

Fifteen credits selected from at least two of the following areas: Biology, Chemistry, and Physics.

SOCIAL SCIENCE

Fifteen credits selected from the offerings in Social Science.

INDUSTRIAL EDUCATION

The Functions of the School of Applied Science and Technology

Each subdivision of the college has a responsibility to contribute to the overall functions of the college. The individual subdivisions (schools, departments, and individuals) will be more deeply involved with certain functions and will have unique contributions to make to the total development.

The School of Applied Science and Technology attempts to fulfill the following functions:

The Education Function

1. To aid students in interpreting industry and technology.
2. To develop a degree of skill in the safe and efficient use of tools and machines in the various areas of industrial activity.
3. To offer experience in the solving of problems with special emphasis on technical problems.
4. To develop an understanding of and a sensitivity to the basic structure of knowledge in technology through principles of tools and machines, materials, structures and constructions, systems and procedures, and personnel relationships.

5. To develop professional competence in analyzing, synthesizing, organizing, and communicating ideas.

The Service Function

1. To aid schools in upgrading programs of industrial education through such devices as consultation on professional and technical problems, evaluation of programs and in-service education of teachers.
2. To provide service to business and industry through such means as testing and evaluation of products and services, adaptation of products for special purposes, and consultation on new ideas.
3. To promote the profession through active participation in professional organizations at all levels and by writing for professional publications.
4. To provide leadership in the areas of our specialties in philosophy and objectives, curricula, physical plant, and methods of organization.

The Research and Scholarship Function

1. To be aware of and sensitive to the accumulated and accumulating body of knowledge in education and technology and to constantly study it.
3. To add to the body of technical and professional knowledge through basic research into new concepts, procedures, and materials.

General Information

A four-year curriculum in the School of Applied Science and Technology at Stout State College leads to a degree of Bachelor of Science with a major in Industrial Education, or Vocational Education and the special state license, or Industrial Technology.

Persons who complete the industrial education curriculum which follows are qualified, upon graduation, to teach industrial arts in junior and senior high schools. Individuals desiring certification as vocational teachers must meet the requirements listed under the vocational trade and industrial education major.

Supplementary licenses to teach additional subjects are based on the electives selected. The general purpose of this curriculum is to provide a balanced educational development. This balanced development is brought about through closely integrated courses in sequenced progression within the several subject groups in technical work, in English, social science, science, mathematics, education, and physical education. The specific objective in the curriculum is to prepare the students for the elementary schools, junior high schools, senior high schools, vocational schools, colleges, and technical institutions. Through controlled choices in the technical and educational sequences, provision is made for licensing or certificating requirements of state departments of education. Through carefully balanced sequenced progression in academic courses, a basic preparation is provided for continued professional study.

The first and second years are general preparation. Students are required to take a range of work indicated in these years in the technical and other

sequences. The basic exploratory range of industrial work required in the first year is supplemented by controlled choices in the second year which continue the development of a broad general foundation in this sequence.

For those students who are not journeymen or who have less than four years of apprenticeship and three years of journeyman experience in the trade, the major in industrial education is open. For those who have the trade experience and who are eligible for classification as vocational teachers, either the major in industrial education or the major in vocational trade and industrial education may be selected.

The tabulated material immediately following indicates the curriculum definitions for the major in industrial education. Following this information is the statement indicating the modifications in the industrial education curriculum for those who are eligible for the curriculum with the vocational trade and industrial education major.

CURRICULUM IN INDUSTRIAL EDUCATION

Degree Requirements

Total for graduation 130 credits
 Required in academics 51-52 credits
 Required in education 22 credits
 Required in technical work 42 credits
 Electives in academics and/or education 14-15 credits
 Completion of *one* of the following options. (Elective credits in academic and education courses will be used to complete this requirement.)

1. A 42 credit major in industrial education with one 22 credit academic minor in art, biology, chemistry, English, history, journalism, mathematics, physics, sociology, or speech. Requirements for these minors are listed in the course descriptions of each department.
2. A broad field major in industrial education consisting of 42 credits of technical work with two 15 credit academic concentrations. These concentrations and their requirements are listed following the industrial education curriculum.

FIRST YEAR

	Sem. Hrs.
Education 123, General Psychology	3
English 102a, English Composition	3
English 102b, English Composition	3
Industrial Education 100, Orientation	0
Industrial Education 101, Drafting	2
Industrial Education 102, Metals	2
Industrial Education 103, Woodworking	2
Industrial Education 117, Printing	2
*Mathematics 209, College Algebra	4

*Mathematics 213, Trigonometry -----	3
Physical Education 101, Personal Health -----	1
Physical Education 127a, Physical Education -----	1
Physical Education 127b, Physical Education -----	1
Social Science 309, General Sociology -----	3
Speech 106, Fundamentals of Speech -----	2

*Students qualifying for M. 250a Mathematical Analysis should substitute M. 250a and b. Students qualifying for M. 260a Calculus and Analytical Geometry should substitute M. 260a and b.

The drafting and the shopwork in the first and second year are required of all students. Recognition of incidental experiences by the students in the field of work covered by any of the courses in this group is made individually. For those entering with specific journeyman experience in the trades, the freshman schedule is modified.

SECOND YEAR

	Sem. Hrs.
Education 222, Principles of Secondary Education -----	2
Education 234, Activity Analysis -----	2
Education 303, Educational Psychology -----	2
English 346, Expository Writing -----	3
Industrial Education 201, Design -----	2
Industrial Education 202, Mechanics -----	2
Industrial Education 203, Plastics -----	2
Industrial Education 206, Electricity -----	2
Industrial Education 290, Industrial Management -----	2
Science 115, Inorganic Chemistry -----	5
Social Science 201, General Economics -----	3
Speech 223, Essentials of Public Speaking -----	2
*Technical Elective -----	2
**Elective in Academics or Education -----	2

In order to qualify for student teaching, application must be made by the second semester of the second year. Candidates must have at least a 2.3 grade point average at the time of admission.

THIRD YEAR

	Sem. Hrs.
Education 305, Methods of Teaching Industrial Education -----	2
Education 408b, Student Teaching in Industrial Education -----	2
Education 441, Education Evaluation -----	2
Science 421, Physics—Electricity, Heat, Mechanics -----	5
Social Science 311, Government -----	3
*Technical Electives -----	14
**Electives in Academics and Education -----	5

FOURTH YEAR

	Sem. Hrs.
Education 401, Introduction to Guidance and Counseling -----	2
Education 408c, Student Teaching in Industrial Education -----	8

Choice of:

Social Science 101a, United States History (3)

Social Science 407, History of the Americas (3)

Social Science 410, Modern World (3) ----- 3

Science Elective ----- 3

*Technical Electives ----- 8

**Electives in Academics and Education ----- 7-8

*Technical electives will be selected in terms of the area of technical concentration chosen.

**Electives will be chosen to complete one of two options. After option is complete, electives may be used for *either* academics or education.

Fifteen Credit Academic Concentrations for Industrial Education

COMMUNICATIONS

Required:

E. 102 a and b, English Composition ----- 6

E. 346, Expository Writing ----- 3

Sp. 106, Fundamentals of Speech ----- 3

Sp. 223, Essentials for Public Speaking ----- 2

Select at least 2 credits from the following:

Ed. 360, Audio-Visual Education ----- 2

E. 306, Reporting and News Writing ----- 2

E. 410, Writing and Selling Feature Articles ----- 2

E. 416, Technical Writing for Industry ----- 2

E. 425, Copy Editing ----- 2

Sp. 322, Techniques of Group Leadership ----- 2

Sp. 325, Discussion and Debate ----- 2

MATHEMATICS

Select 15 credits from the following:

M. 209, College Algebra ----- 4

M. 213, Trigonometry ----- 3

M. 250 a and b, Mathematical Analysis ----- 8

M. 260 a, b, c, Calculus and Analytical Geometry ----- 15

M. 315a and b, Calculus ----- 8

SCIENCE

Required:

Sc. 115, Inorganic Chemistry ----- 5

Sc. 421, Physics—Electricity, Heat, Mechanics ----- 5

Select at least 5 credits from the following:

Sc. 122, General Biology ----- 3

Sc. 214, Physiology and Anatomy ----- 3

Sc. 314, Botany ----- 3

Sc. 316, Zoology ----- 3

Sc. 116, Inorganic Chemistry ----- 4

Sc. 208, Organic Chemistry ----- 4

Sc. 436, Qualitative Analysis ----- 3

Sc. 438, Quantitative Analysis ----- 3

Sc. 445, Chemistry of Materials -----	3
Sc. 446, Metallurgy -----	3
Sc. 423, Physics—Sound, Light -----	3
Sc. 425, Physics—Strength of Materials -----	3
Sc. 427, Physics—Electronics -----	2
Sc. 429, Physics—Modern Physics -----	3
Sc. 431, Physics—Statics -----	2
Sc. 433 Physics—Dynamics -----	2

SOCIAL SCIENCE

Required:

S.S. 201, General Economics -----	3
S.S. 309, General Sociology -----	3
S.S. 311, Government -----	3

Choice of:

S.S. 407, History of the Americas (3) -----	
S.S. 410, Modern World (3) -----	3

Select at least 3 credits from the following:

S.S. 301, Economic History of the United States -----	3
S.S. 414, Labor Problems -----	2
S.S. 420, Cultural Anthropology -----	3
S.S. 450, Managerial Economics -----	3

Cooperative Work

All students in the School of Applied Science and Technology select certain concentrations of work in their technical sequence in shop work, drawing, and design. From time to time opportunities are available for advanced students to spend some time in selected industrial establishments securing practical production experience. Regular production experience is available on the campus in certain areas of work. Constant effort is maintained to keep such opportunities available in establishments representing the various content areas included in the technical sequence. The purpose of such work is to give students modern industrial experiences to extend the training experiences secured on the campus. For students who come to Stout State College after having already attained sufficient journeyman experience in a trade the vocational major is available.

Manual Arts Therapy Major

Manual arts therapy is a broad field major which combines industrial education with therapeutic psychology. The student must satisfactorily complete the curriculum for Industrial Education including student teaching. During his last year he serves as an intern for nine to twelve weeks in two Veterans Administration hospitals where he takes specialized courses and practices in therapeutic psychology. Upon completion of the program he is eligible for positions in hospitals and rehabilitation centers as a manual arts therapist. This work includes interpreting and implementing physicians' work therapy prescriptions; measuring and developing adult patients' work

capacities by means of industrial work situations; and case conferences with physicians, clinical psychologists, consulting psychiatrists, and other therapists.

VOCATIONAL TRADE AND INDUSTRIAL EDUCATION MAJOR

The 1939 Wisconsin legislature enacted legislation which makes possible the offering of curricula leading to the degree of Bachelor of Science and the degree of Master of Science with a major in Vocational Education. This major on both the graduate and undergraduate levels is in addition to the majors in Home Economics and Industrial Education already available on the undergraduate and graduate levels.

In the curriculum for the degree of Bachelor of Science with a major in Vocational Education, those applying for the major must be eligible for the vocational teaching certification upon graduation. Ordinarily this certification is based upon certain definitions of practical experience. Candidates who are not eligible for vocational certification upon graduation will not be eligible for the curriculum leading to the vocational major.

For curriculum requirements for the vocational major on the graduate level, see the *Graduate Studies Bulletin*.

Credit Examinations for Vocational Majors

Trade experience credit examinations will be arranged to permit candidates for the undergraduate trade and industrial vocational major to earn through examinations up to a maximum of twenty-four semester hours of credit in the total required for the degree of Bachelor of Science. This credit will be available in six semester hour amounts at certain stated periods in the student's progress through the other credits earned through residence work. In the schedule listed below, the plan and the rate at which the twenty-four semester hours of trade examination credit become available are indicated.

When 32 sem. hrs. residence completed	6 sem. hrs. credit on occupational experience examination released
When 32 sem. hrs. (additional)	6 sem. hrs. (additional)
When 32 sem. hrs. (additional)	6 sem. hrs. (additional)
When 8 sem. hrs. (additional)	6 sem. hrs. (additional)
104 sem. hrs.	24 sem. hrs.

The credit and grade point requirement for the residence work will be the same as those for the industrial major. For graduation it will be necessary for the student to have twice as many grade points as semester hours in residence credit.

In this program of examinations based upon occupational experience, use will be made of advisory committees to assist Stout State College in the

formulation and conducting of examinations. Agencies to be represented in these advisory examining committees will include the State Board of Vocational and Adult Education, employers in the occupation in which the candidate is being examined, employees in the occupation, and Stout State College. The examinations will be conducted at Stout State College and will include oral, written, and performance sections.

The occupational experience examinations is an optional channel for use by undergraduate vocational major students.

Alternatives are as follows:

USING VOCATIONAL MAJOR EXAMINATION

A candidate who desires to use the channel of vocational major examination must have completed apprenticeship and three years of successful journeyman occupational experience. In some instances these requirements will not have been completed at the time the student starts his attendance at Stout State College. In such a case the student must have completed these requirements at the time he has completed his residence work for the degree.

In conducting these examinations, as a general rule, the major portion of the written and performance parts of the examination will be completed before the committee meets at Stout State College. At the time of the committee meeting the oral examination will be conducted and the checking and evaluating of the results of the written and performance parts of the examination will be completed. This plan will, however, be subject to modifications when necessary. A candidate will be required to meet a reasonable fee charge for the examination, such fee to be used in meeting the expenses in connection with the examination.

VOCATIONAL MAJOR PROGRAM WITHOUT MAJOR EXAMINATION

Students who have a major concentration in a technical area in the regular industrial education curriculum may present this as an equivalent of apprenticeship. In addition to the completion of the four year curriculum with the above concentration, a minimum of one and one-half years of occupational experience in the same technical area on the adult journeyman level is required initially with an additional one and one-half years to be gained subsequently.

The work outlined for the curriculum for the vocational major is closely articulated with certification requirements of the Wisconsin State Board of Vocational and Adult Education.

Wisconsin State Board Vocational and Adult Education Certification Requirements

PROVISIONAL CERTIFICATE

1. Education. The following requirements must be fulfilled and the certified person must agree to work toward fulfilling the requirements for a

Standard Certificate at the rate of six credits each two-year period or equivalent.

- a. Teacher assistants: have completed two years of college, junior college, or technical institute, or be enrolled in a four-year teacher education program. In addition to work experience required, appropriate work experience of a learning nature may be substituted for a maximum of one-year equivalency.
 - b. Teachers, teacher coordinators, and part-time directors: have completed a Bachelor's Degree with appropriate major or minor. In addition to the work experience requirement, appropriate work experience, of a learning nature, may be substituted by teachers of skilled subjects.
 - c. Supervisors, coordinators, counselors, master teachers, department heads: a Bachelor's Degree in appropriate field.
 - d. Directors: a Master's Degree in appropriate field.
2. Occupational Experience. The following requirements must be fulfilled and the certified person must agree to work toward meeting the work experience requirements for the Standard Certificate at the rate of 4 months' experience each two years or equivalent.
- a. Teacher assistants: have completed one year of work experience in appropriate subject field.
 - (1) General subjects teacher: 3 months.
 - (2) Part-time directors, homemaking, business education, and related subjects teachers: 6 months.
 - (3) Trade and industrial, distributive teachers: 1½ years.
 - (4) Technical teachers: 6 months in area of teaching.
 - c. Directors, supervisors, coordinators, counselors, department heads, and master teachers: appropriate education beyond that required may be substituted for no more than two-thirds of the work experience.
 - (1) Appropriate successful work experience as follows:
 - (a) Supervisors, master teachers, and department heads: 6 months.
 - (b) Coordinators and counselors: 1½ years.
 - (c) Directors: 3 years.
 - (2) Teaching experience of directors, supervisors, coordinators, counselors, department heads, master teachers: 3 years of teaching experience.

STANDARD CERTIFICATE

1. Education. The following must be obtained in addition to the requirements for a Provisional Certificate.
 - a. Teacher assistants: have completed courses or equivalents in:

- (1) Class management and class accounting (2 credits).
- (2) Methods and materials of teaching (2 credits).
- (3) History and objectives of vocational and adult education and its relationship to the total educational programs (2 credits).
- b. Teachers, teacher-coordinators, and part-time directors: have completed courses or equivalent in:
 - (1) Knowledge of history and objectives of vocational and adult education, and its relationship to the total educational program (2 credits).
 - (2) Knowledge of the development, growth, and learning processes of the individuals to be taught (3 credits).
 - (3) Knowledge of methods and techniques of teaching and development of course material (3 credits).
 - (4) Supervised teaching experience (4 credits or equivalent).
 - (5) Teacher-coordinator to have training in and knowledge of special methods and problems of coordination (4 credits).
- c. Directors, supervisors, coordinators, counselors, department heads, and master teachers: have completed courses or equivalents in the following:
 - (1) Demonstrate the same competence as teachers.
 - (2) Demonstrate knowledge of special methods and problems relative to the position (4 credits).
 - (3) Coordinators, counselors, and master teachers to obtain a Master's Degree.
 - (4) Supervisors, department heads to obtain 30 credits or the equivalent beyond the Bachelor's Degree.
2. Occupational Experience. Teacher assistants, teachers, and teacher-coordinators, part-time directors, supervisors, coordinators, counselors, department heads, and master teachers: twice as much occupational experience as required for Provisional Certificate.
3. Teaching Experience. Teacher assistants, teachers, teacher-coordinators, part-time directors, directors, supervisors, counselors, department heads, and master teachers: complete three years of satisfactory teaching. Directors, supervisors, counselors, coordinators, and department heads: complete three years of successful experience in position for which certified.

INDUSTRIAL TECHNOLOGY

The curriculum leading to the degree of Bachelor of Science in Industrial Technology is designed for students who wish to prepare for positions in industry. Graduates of this curriculum do not meet certification requirements and are not therefore qualified to teach in public schools.

Candidacy for the Bachelor of Science in Industrial Technology

A student who desires to earn the Bachelor of Science degree in Industrial Technology must be formally enrolled as a Candidate for the Bachelor of Science in Industrial Technology at least two academic semesters prior to the date the degree is to be granted. He may enroll as a candidate upon completion of sixty-four semester hours of credit, completion of all the courses in mathematics, science, and industrial technology required in the first two years of this curriculum, and accumulation of a grade point average of at least 2.25. Application for enrollment as a candidate for the degree may be submitted during the semester in which the applicant will complete the above requirements.

CURRICULUM IN INDUSTRIAL TECHNOLOGY

FIRST YEAR

	Sem. Hrs.
Education 123, General Psychology	3
English 102a, English Composition	3
English 102b, English Composition	3
Industrial Education 100, Orientation	0
Industrial Education 101, Drafting	2
Industrial Education 102, Metals	2
Industrial Education 103, Woodworking	2
Industrial Education 117, Printing	2
*Mathematics 209, College Algebra	4
*Mathematics 213, Trigonometry	3
Physical Education 101, Personal Health	1
Physical Education 127a, Physical Education	1
Physical Education 127b, Physical Education	1
Social Science 309, General Sociology	3
Speech 106, Fundamentals of Speech	2

The shop work and drafting in the first and second years are required of all students. Recognition of incidental experiences by the students in the field of work covered by any of the courses in this group is made individually. For those entering with specific journeyman experience in trade, the freshman schedule is modified.

SECOND YEAR

	Sem. Hrs.
Education 235, Trade Analysis	2
Industrial Education 201, Design	2
Industrial Education 202, Mechanics	2
Industrial Education 203, Plastics	2
Industrial Education 206, Electricity	2
Industrial Education 290, Industrial Management	2
*Mathematics 314, Analytical Geometry	3
*Mathematics 315a, Calculus	4

Science 115, Inorganic Chemistry	5
Social Science 201, General Economics	3
Technical Courses	6
*Students qualifying for M. 250a Mathematical Analysis should substitute M. 250a and b and M. 315a Calculus for the first and second years. Students qualifying for M. 260a Calculus and Analytical Geometry should take the sequence M. 260a, b, and c.	

THIRD YEAR

	Sem. Hrs.
Education 430, Industrial Psychology	2
English 346, Expository Writing	3
Industrial Education 410, Production Control	2
Science 208, Organic Chemistry	4
Science 421, Physics—Electricity, Heat, Mechanics	5
Science 423, Physics—Sound, Light	3
Speech 223, Essentials of Public Speaking	2
Academic Electives	4
Technical Courses	8

FOURTH YEAR

	Sem. Hrs.
Industrial Education 400, Quality Control	2
Industrial Education 420, Time and Motion Study	2
Science 425, Physics—Strength of Materials	3
Social Science 311, Government	3
Choice of:	
Social Science 407, History of the Americas (3)	
Social Science 410, Modern World (3)	3
Social Science 414, Labor Problems	2
Academic Electives	5
Technical Courses	12

Cooperative Five Year Program in Industrial Technology

A five year cooperative program leading to the degree of Bachelor of Science with a major in Industrial Technology is also available to selected advanced students. Students enrolled in this program will complete, in addition to four years of college courses, one more year of work in an appropriate industry.

Students may be admitted to this five year cooperative program upon the completion of sixty-four semester hour credits. All students enrolled in this program must be Candidates for the Bachelor of Science in Industrial Technology. Selection is based upon scholarship, a grade point average of 2.5 or better being required.

The first three years of the five year cooperative program are the same as for the four year program outlined above.

FOURTH YEAR

	Sem. Hrs.
Industrial Education 400, Quality Control	2
Industrial Education 408, Cooperative Industrial Assignment	2
Industrial Education 420, Time and Motion Study	2
Social Science 414, Labor Problems	2
Technical Courses	8

FIFTH YEAR

	Sem. Hrs.
Industrial Education 408, Cooperative Industrial Assignment	2
Science 425, Physics—Strength of Materials	3
Social Science 311, Government	3
Choice of:	
Social Science 407, History of the Americas (3)	
Social Science 410, Modern World(3)	3
Academic Electives	5

Light Building Construction

One of the programs of specialization in industrial technology is Light Building Construction. A few of the occupational opportunities for graduates in industrial technology with an emphasis in light building construction include positions as home designers, estimators, field inspectors for architectural firms, lumberyard managers, and building supply salesmen.

Technical courses elected should include courses in building construction, architectural drafting, and wood technics. Industrial technology instructors aid in individual program planning.

Industrial Technology with Option in Technical Writing

Additional opportunities for industrial technology graduates exist in the rapidly expanding field of technical writing. A sequence in this area may be combined with the regular curriculum in industrial technology. Refer to the requirements for a minor in journalism (technical writing for business and industry) listed under course descriptions in English and Journalism.

LIBERAL STUDIES PROGRAM

Stout State College is expanding its offerings in the area of Liberal Studies in order to serve more adequately those students who (1) desire two years of general education as a background for good citizenship and useful community living; (2) desire one or two years of college work near home before transferring to a liberal arts college or a university; (3) desire an introduction to college life in an atmosphere where personal, educational,

and vocational goals may be formulated; (4) desire pre-professional courses basic to a major profession.

Before registering in the Liberal Studies Program, a student who has already selected a college from which he expects to be graduated should, if possible, obtain and study catalogs from that institution. Correspondence with officials of the college will also help him to determine the most relevant courses and assure him of acceptance of the credits.

Certain courses are basic to almost every college curriculum:

Two semesters of English Composition (placement according to proficiency)

Mathematics (placement according to proficiency)

Two semesters of laboratory science (biology, chemistry, or physics)

Two semesters of history (either United States History or History of Western Civilization)

Speech

Foreign Language

Physical Education

Other subjects frequently required for college graduation or frequently recommended as electives include: literature (English, American, or both), sociology, economics, American government, additional laboratory science, additional mathematics, psychology, philosophy, additional speech, art, and music. In addition there are many technical courses in both Home Economics and Industrial Education which serve as general education or would apply in specific professional curricula.

Pre-professional requirements differ widely from college to college. Usually a year or more of pre-professional work can safely be taken at Stout in:

Agriculture	Medicine
Architecture	Nursing
Commerce	Pharmacy
Dentistry	Physical Therapy
Education	Medical Technology
Engineering	Social Work
Journalism	Veterinary Medicine
Law	

Pre-professional courses should be carefully worked out with the help of the adviser and catalogs of professional schools.

Cooperative Training Program for Nurses

Young women who plan to enter the three-year program of the Madison General Hospital School of Nursing, Madison, Wisconsin, are able to complete the entire first year of that program on the Stout campus and then enter directly the clinical program at the School of Nursing in Madison. During her September-June year at Stout State College, each nursing student completes specified credits in English, chemistry, physiology and anatomy, biology, psychology, sociology, and elective subjects.

DESCRIPTION OF COURSES

The courses numbered from 100 to 199 are primarily for freshmen; those numbered from 200 to 299, for sophomores; 300 to 399, for juniors; and 400 to 499, for seniors. However, recent curricular changes have caused some irregularities in this regard. Courses numbered 500 and above are restricted to graduate students only and are described in the *Graduate Studies Bulletin*.

In advanced courses prerequisites are listed in the course descriptions. For flexibility in programming, students are occasionally permitted to take certain courses concurrently; such courses are designated as Prerequisite or Parallel.

The distribution of lecture and laboratory hours for shop and laboratory courses is given in parentheses. For example, (1-4) means one hour of lecture or discussion and four hours of laboratory per week. Most courses operate on the eighteen-week semester, and credits are expressed in semester hours. However, certain courses in Industrial Education are scheduled on the nine-week or quarter basis; such courses are indicated by Qr. and the class hours per week are increased accordingly.

EDUCATION AND PSYCHOLOGY

PSYCHOLOGY

Bolstad, Courtney, Klitzke, Oetting, Rayhill, Salyer

Education 123 *General Psychology* 3 Cr.

Scientific versus unscientific approaches in understanding behavior. Efficient study methods, individual differences, motivation, emotions, personality development, thinking, and psychological problems of college, community, and vocational life.

Education 303 *Educational Psychology* 2 Cr.

Prerequisite: Ed. 123

Child and adolescent development, learning and its guidance, the individual student, and the implications of interests and attitudes.

Education 350 *Adolescent Psychology* 2 Cr.

Prerequisite: Ed. 123

The physical, emotional, social, moral, and intellectual development of secondary school youth.

Education 352 *Child Psychology* 2 Cr.

Prerequisite: Ed. 123

Psychological development of children. Emphasis on age groups spanning the pre-school and the pre-pubescent child; methods for scientific measurement and understanding of child behavior.

Education 430 *Industrial Psychology* 2 Cr.

Prerequisite: Ed.123

Use of psychological methods in personnel management in industry. Emphasis is on personnel policy formation and techniques in placement, interviewing, efficiency, job evaluation and training, merit rating, morale, and safety.

Education 431 *Abnormal Psychology* 2 Cr.

A study of more serious mental disturbances. Emphasis on the growing importance of mental disorders and on their early detection and referral.

Education 432 *Psychology of the Exceptional Child* 2 Cr.

Guidance of the learning and development of children who deviate from the normal, the mentally retarded, gifted, socially and emotionally disturbed, and those with visual, speech, and orthopedic problems.

Ed. 513 Personality and Mental Health, Ed. 514 Vocational Psychology, and Ed. 555 Psychology of Learning are restricted to graduate students. See the *Graduate Studies Bulletin* for course descriptions.

EDUCATION—GENERAL

Bolstad, Phelps, Rudiger, Salyer, Wall

Education 222 *Principles of Secondary Education* 2 Cr.

Prerequisite: Ed. 123

The evolution, status, and trends of secondary education. Needs of our democratic society: philosophy, organizational problems, curriculum development, and the responsibilities of the individual teacher.

Education 402 *Principles of Vocational and Adult Education* (Qr.) 2 Cr.

The philosophy, historical development, principles and practices, and organization of public vocational education in the nation.

Education 472 *Coordination* 2 Cr.

Principles of coordination in vocational education for apprenticeship training, distributive education, trades and industries, and diversified occupations. Work-experience program in general education.

Education 479 *Public Relations* 2 Cr.

Defines the publics, objectives, and media of public relations in industry and education. Provides practice with such tools as news stories and features. Each student carries out an actual publicity program in the community.

Education 481 *American Higher Education* 2 Cr.

An introduction to the ramifications of the American system of higher education including history, philosophy, administration, curriculum, students, teachers, and demands for employment. Undergraduates by permission of the instructor only.

Education 492 *Administration of Vocational and Adult Education* 2 Cr.

Survey and analysis of problems in the administration of a vocational and adult school including legal status, policy making, staff personnel, student personnel, curriculum, evaluation, public relations, physical plant, and business management.

Ed. 500 Philosophy of Modern Education, Ed. 501 Research Procedures, Ed. 502 Principles of Supervision, Ed. 506 Problems of Supervision, Ed. 510 Applied Research, Ed. 526 Administration, I.E. 533 Survey Procedures, Ed. 538 Elementary School Curriculum, Ed. 539 High School Curriculum, Ed. 561 Educational Statistics, and Ed. 570 Thesis Plan A are restricted to graduate students. See the *Graduate Studies Bulletin* for course descriptions.

EDUCATION—AUDIO-VISUAL

Barnard, McMurtrie

Education 360 *Audio-Visual Education* (1-2) 2 Cr.

Methods of selecting and using audio-visual materials effectively in teaching. Experience in operating equipment, production of materials, practice in planning and presenting a lesson.

Education 439 *Motion Picture Production* (0-4) 2 Cr.

Prerequisite: I.E.205, Ed. 360 or consent of instructor

Production of instructional sound motion pictures utilizing "live" projects which will be marketed. Production planning, content research, treatments, storyboard, script writing, shooting, editing, sound recording, titling, and other technical problems of production.

Ed. 522 Problems in Audio-Visual Instruction, Ed. 540 Advanced Technical Problems—Audio-Visual Education, Ed. 547 Communications Media Design, and Ed. 560 Audio-Visual Administration are restricted to graduate students. See the *Graduate Studies Bulletin* for course descriptions.

EDUCATION—GUIDANCE

Anderson, Bolstad, Courtney, Iverson, Pedersen, Rayhill, Rimel, Salyer

Education 401 *Introduction to Guidance and Counseling* 2 Cr.

Prerequisite: For education students, junior standing

An overview of policies and practices of organized guidance programs for schools and colleges. Emphasis is given to the philosophy and evaluation of guidance, understanding the individual, counseling, and group guidance as it affects the classroom teacher and personnel worker.

Education 429 *Guidance in the Elementary School* 2 Cr.

The nature and conditions of guidance in the elementary school. Curricular and non-curricular guidance techniques, referrals, and parent counseling. Recommended principles and practices in guidance applied to the elementary school child.

Education 475 *Counseling Procedures* 2 Cr.

Prerequisite: Ed. 401

Psychological study of the interview. Consideration given to various interview objectives, points of reference, kinds of questions, and the improvement of techniques for various purposes of the teacher and counselor.

Education 490 *Tests and Measurements in Counseling* 2 Cr.

Prerequisites: 401 and 441

Selection, interpretation, and use of tests and inventories for teachers and counselors. Study of achievement, aptitude, interest and personality tests with experience in the interpretation of results.

Education 491 *Occupational and Educational Information* 2 Cr.

Prerequisite: Ed. 401

Occupational and educational opportunities. Evaluation of information sources, occupational requirements, trends, and uses.

Ed. 531 Problems in Guidance, Ed. 541 Individual Mental Testing, Ed. 550 Appraising the Individual, Ed. 552 Group Guidance Procedures, Ed. 565 Organization and Administration of Guidance, and Ed. 590 Supervised Practice in Counseling are restricted to graduate students. See the *Graduate Studies Bulletin* for course descriptions.

EDUCATION—HOME ECONOMICS

Harper, Petrick, Rosenthal, Spratt

Education 310 *Introduction to Teaching Home Economics* 2 Cr.

Prerequisite or parallel: Ed. 303

Philosophy, objectives, and organization of home economics at the secondary level. Instructional materials, unit and lesson plans. Observation and participation in high school homemaking classes.

Education 320 *Methods of Teaching Home Economics* 2 Cr.

Prerequisite or parallel: Ed. 303

Principles of teaching applied to the selection, organization, and development of home economics subject matter. For dietitians and other groups with specialized needs.

Education 408 *Student Teaching in Home Economics* 8 Cr.

Prerequisite: Ed. 310 Parallels: Ed. 427 and 441

Orientation to teaching, supervised observation, participation, and teaching in a high school homemaking department off-campus for six weeks. The student will live in the community where she teaches. Observation in adult homemaking classes on campus.

Education 416 *Problems in Teaching Vocational and Adult Homemaking* 2 Cr.

Prerequisites: Ed. 402, 427, and three years of teaching vocational or adult homemaking.

Analysis of problems confronting experienced teachers; development of tentative solutions.

Education 427 *Methods of Teaching* 4 Cr.

Prerequisite: Ed. 310 Parallels: Ed. 408 and 441

Techniques of teaching homemaking, including vocational and adult education. Methods and procedures for classroom teaching, home experience program, F.H.A., and adult education. Adapted to meet the needs, interests, and abilities of adolescent and adult classes.

Education 428 *Home Economics for the Junior High School* 3 Cr.

Principles of curriculum development for the home economics program in the junior high school. Emphasis on recent research, philosophy, and emerging practices in program patterns.

Education 441 *Education Evaluation* 2 Cr.

Prerequisite: Ed. 310

Techniques for developing devices to evaluate pupil progress, characteristics and limitations of different types of tests. Interpretation of test scores and grades by means of simple statistical procedures, methods of assigning grades.

Education 451 *Evaluation in Home Economics Education* 2 Cr.

Criteria, techniques, and devices for evaluating the home economics program. Opportunity for developing devices.

Education 462 *Workshop for Homemaking Teachers* 2 or 3 Cr.

Prerequisite: Teaching experience or consent of instructor

Planned for homemaking teachers in one or two teacher departments. Teachers select problems on which they wish to work.

Ed. 508 Curriculum Studies in Home Economics, Ed. 520 Current Problems in Home Economics Education, Ed. 525 Supervision of Student Teaching in Home Economics, Ed. 544 Seminar in Home Economics Education, and Ed. 575 Problems in Home Economics Education are restricted to graduate students. See the *Graduate Studies Bulletin* for course descriptions.

EDUCATION—INDUSTRIAL EDUCATION

Chinnock, Kranzusch, Morical, Rudiger, Rue

Education 234 *Activity Analysis* 2 Cr.

Study of analysis of activities for instructional purposes and for personnel work. Jobs, operations, information topics, blocking, custom occupations, service occupations, checking levels, progression factors defined. Development of a complete analysis of an occupation for instructional use.

Education 235 *Trade Analysis* 2 Cr.

For vocational majors. May be substituted for Education 234 in the curriculum. Techniques of analyzing industrial occupations for instructional units in vocational teaching.

Education 305 *Methods of Teaching Industrial Education* 2 Cr.

Prerequisites: Ed. 234 and 303

Study of teaching methods in use in unit and general shop classes. Instruction planning, methods of organization and management, instruction aids, professional ethics. Directed observation of representative school shops.

Education 407 *Teaching Trade and Industrial Subjects* 2 Cr.

Recognized principles and methods of teaching applied to typical shop, laboratory, technical, and related subjects found in schools of vocational and adult education.

Education 408b *Student Teaching in Industrial Education* (Qr.) 2 Cr.

Prerequisites or parallel: Ed. 305, 441, and junior standing

Directed observation and supervised teaching on selected junior and senior high school levels. Teaching experience acquired in on-campus industrial arts shops organized on the unit, unit general, or general shop basis. Group conferences held regularly on problems concerned with student teaching.

Education 408c *Student Teaching in Industrial Education* (Qr.) 8 Cr.

Prerequisite: Ed. 408b

Directed teaching in selected off-campus schools in unit, unit general, or general shops. Taken concurrently with related subjects during the student teaching block in senior year.

Education 415 *Technical Education Programs* 2 Cr.

Prerequisite: Senior or graduate standing

Philosophy, principles, organization, operation, and structure of technical education programs at the 13th and 14th year or college level.

Education 423 *Safety Education* 3 Cr.

Highway, home, industrial, farm, school and recreational safety. Fire prevention, civil defense, color dynamics. Promotion of a safety program, its content, methods, and materials of instruction.

Education 441 *Education Evaluation* 2 Cr.

Evaluative devices and their use in measuring student attainment of course objectives. Characteristics and limitations of different types of tests and test questions; the interpretation of test scores and grades by means of simple statistical procedures; methods of grading manipulative work and assigning final grades.

Education 443 *Organization of Content Material for Trade, Technical, and Industrial Subjects* 2 Cr.

Individual work following approved practice in the development of instructional material for vocational teaching.

Education 448 *Driver Education*

3 Cr.

Teaching methods in driver training. Teaching a trainee to drive so as to pass written and road tests. Research problem or construction of test apparatus. Driver education certification by A.A.A.

Education 452 *Driver Education (Advanced Course)*

3 Cr.

Prerequisites: Ed. 448 and Driver Education Certificate or its equivalent
Program details in driver education in our nation's schools. State laws, school laws and regulations, teaching requirements, technique for improving teaching methods through evaluation and analysis; use of diagnostic tests and materials. Cooperation with state and other organizations in the presentation of instructional materials and tests.

Education 455 *Traffic Safety and Engineering*

3 Cr.

Prerequisites: Ed. 423 and 448

A study of traffic surveys which involve high accident frequency location, driver observance of stop signs, speed signs, and traffic signals, pedestrian observance of traffic signals, motor vehicle and pedestrian volume. Includes accident records and facts as well as accident investigation procedures.

Education 470 *Conference Leading I*

2 Cr.

Prerequisite: Ed. 305 or equivalent

Study of teaching. Study and practice of the principles and techniques of conference leading as an instructional device in vocational education.

I.E. 520 Labor and Industrial Relations and Ed. 568 Curriculum Procedures II (Analysis Techniques for Instructors) are restricted to graduate students. See the *Graduate Studies Bulletin* for course descriptions.

HOME ECONOMICS

GENERAL

Trullinger

Home Economics 100 *Orientation*

0 Cr.

An orientation course concerned with typical college problems—personal, social, professional, and vocational guidance in the field of home economics.

CLOTHING AND TEXTILES

Barra, Cox, Halvorson, Todd, Van Ness

Home Economics 102 *Fundamentals of Clothing*

(1-4) 3 Cr.

Fundamentals of clothing construction.

Home Economics 102 (Honors) *Fundamentals of Clothing*

(1-4) 3 Cr.

Prerequisite: Proficiency examination

Fundamentals of clothing construction in cotton, wool, and synthetics. Demonstrations and illustrative materials.

Home Economics 218 *Clothing* (1-4) 3 Cr.

Prerequisite: H.E. 102

Personal and technical problems in the selection and construction of garments of wool and synthetic fabrics. Emphasis on fitting.

Home Economics 220 *Clothing Selection* (2-0) 2 Cr.

The importance of personal appearance and factors which contribute to it. Application of art principles to the selection of clothing.

Home Economics 315 *Textiles* (2-2) 3 Cr.

Study of fibers, yarns, weaves, finishes, and design as applied to the selection of clothing and household fabrics.

Home Economics 325 *Principles of Merchandising* (2-3) 3 Cr.

Study of merchandise with application of fundamentals for selling, buying, and marketing procedures for the clothing industry. Supervised experience on Saturdays or one month during the vacation period included.

Home Economics 342 *Costume Millinery* (0-4) 2 Cr.

Prerequisite: H.E. 102

Basic fundamentals of designing and constructing fabric, straw, and felt hats; coordination of millinery and other accessories; procedures in purchasing supplies from wholesale houses.

Home Economics 412 *Applied Dress Design* (1-4) 3 Cr.

Prerequisite: H.E. 218

Application of principles of costume design in the construction of garments by means of draping. Emphasis on individuality in costume through appropriate use of line, proportion, color, and texture.

Home Economics 413 *Flat Pattern Design* (1-2) 2 Cr.

Prerequisite: H.E. 218 and 220

Application of principles in developing patterns of individual design from a basic foundation pattern. Fitting problems solved by using a basic pattern made in muslin.

Home Economics 415 *Economics of Family Clothing* (3-0) 3 Cr.

Prerequisite or Parallel: S.S. 309

Introduction to patterns of clothing consumption, production, and distribution as they relate to the family. Individual reports and papers.

Home Economics 465 *European Study Tour* 3-6 Cr.

Study tour introducing students to national and international centers of influence in art, clothing, and textiles. Six-week tour of European mills and fashion centers.

Home Economics 471 *History of Costume* (2-0) 3 Cr.

Development of costume throughout the ages. Fashion as it reflects the social climate of the period; factors which influence change in fashion; qualities in style that make for lasting beauty; influence of the past on present-day costume.

Home Economics 473 *Clothing and Textile Industry* (3-0) 3 Cr.
Prerequisite: H.E. 415

The study of the clothing and textile industry, its organization, promotion methods, and the interrelationship of the major factors of the industry and its markets.

H.E. 500 Tailoring, H.E. 505 Clothing Today's Family, H.E. 514 Seminar in Clothing and Textiles, H.E. 544 Workshop in Clothing and Textiles, H.E. 551 Problems in Clothing and Textiles, and H.E. 572 Advanced Textiles are restricted to graduate students. See the *Graduate Studies Bulletin* for course descriptions.

FAMILY RELATIONS AND CHILD DEVELOPMENT

Rimel, Smith

Social Science 326 *Marriage and the Family* 2 Cr.

A socio-psychological study of the family designed to aid the unmarried as well as the married student. Consideration of major personal and social issues confronting the family today.

Home Economics 334 *Personality Growth and Development of the Child*
Prerequisites: Ed. 123 and junior standing 3 Cr.

Study of the personality growth of the child, physically, mentally, emotionally, and socially with guidance implications on the basis of growth. Observation in child development laboratory.

Home Economics 424 *Principles and Practices of Child Guidance* 2 Cr.
Prerequisite: H.E. 334

Study of the factors and principles involved in the personality development of the pre-school child and their application to the experiences of the children in the child development laboratories. Evaluation of the literature in this field. Assist in the nursery school.

Home Economics 427 *Workshop in Family Relationships and Mental Health* 1 Cr.

General orientation and specialized training in leading, counseling, and instructing others in the field of family relationships and mental health. Special work groups on personal problems, the techniques of marriage counseling, and the role of the school, the home, and the church in the field of family life education.

FOOD, NUTRITION, DIETETICS, AND

INSTITUTION MANAGEMENT

Carrison, Cotter, James, Killian, Meiller, Viens

Home Economics 114 *Food Preparation* (3-4) 5 Cr.

Basic principles and modern techniques used in the preparation of acceptable food products.

- Home Economics 212 *Family Nutrition* (2-2) 3 Cr.
Prerequisite: H.E. 114
Principles of human nutrition and application in the selection of food for members of the family group.
- Home Economics 230 *Food Preparation* (1-4) 3 Cr.
Prerequisite: H.E. 114
Basic standards and methods involved in the appraisal, preparation, and preservation of food.
- Home Economics 300 *Applied Institution Management* (1-4) 3 Cr.
Prerequisite or Parallel: H.E. 308
Preparation and service of meals in the college tea room. Meal planning, recipe selection, economical use of materials and time, dining room management, food preparation, and cost control.
- Home Economics 308 *Meal Management* (2-2) 3 Cr.
Prerequisite: H.E. 212
Planning, preparation, and service of meals. Management of money and time, efficient use of equipment, consideration of nutrition needs, food habits and social customs of family groups.
- Home Economics 310 *Nutrition and Dietetics* (2-2) 3 Cr.
Prerequisites: H.E. 212 and Sc. 322
Fundamental principles of human nutrition applied to individual, family, community, and world problems.
- Home Economics 328 *Institution Administration* 3 Cr.
Prerequisite or Parallel: H.E. 308
Organization and administration of food service in institutions. Personnel management, cost control, sanitation and housekeeping, and layout and equipment.
- Home Economics 418 *Diet in Disease* (2-2) 3 Cr.
Prerequisites or Parallel: H.E. 310 and Sc. 115
Principles and methods for the use of diet as a therapeutic measure in certain abnormal conditions.
- Home Economics 438 *Experimental Food* (0-6) 3 Cr.
Prerequisites: H.E. 230 and Sc. 115
Experimentation with selected food materials, techniques, and equipment. Opportunity for directed study in an individually chosen area.
- Home Economics 441 *Food Service Accounting* 3 Cr.
Prerequisite: H.E. 328
Fundamental principles of accounting. Preparation and use of accounting records, financial reports, food cost reports, and subsidiary food service records.
- Home Economics 442 *Advanced Food Studies* (1-2) 2 Cr.
Prerequisites: H.E. 230 and 308
Based on the student's special interest in the field of food selection, preparation, and appraisal.

Home Economics 443 *School Food Service*

2 or 3 Cr.

Prerequisite: H.E. 308 or equivalent

Laboratory in the college food service units with emphasis on well-balanced meals, and selling qualities of food through eye appeal, flavor, and quality.

Home Economics 452 *Institution Food Preparation*

(1-4) 3 Cr.

Prerequisites: H.E. 308 and 328

Theory and practice in a quantity food service including sanitation, cost studies, menu planning, principles of quantity food preparation and service, food receiving and storage, and use and care of equipment.

Home Economics 454 *Institution Food Purchasing*

2 Cr.

Prerequisite: H.E. 328

Methods of purchasing food in large quantities. Determination of standards, specific needs, and industrial offerings; formulation of specifications, buying procedures, and controls.

Home Economics 463 *Institution Management Problems*

Prerequisite: H.E. 328

(0-4 or 6) 2 or 3 Cr.

Directed individual work in selected problems. Laboratory problems in the college food service units.

Home Economics 476 *Nutrition Education for the Elementary Grades*

2 Cr.

Basic nutrition for teachers of elementary school children.

H.E. 501 Trends in Nutrition, H.E. 508 Food Seminar, H.E. 511 Nutrition Seminar, H.E. 513 Institution Management Seminar, H.E. 546 Modern Methods in Food Preparation, H.E. 547 Problems in Food and Nutrition, and H.E. 556 Advanced Experimental Food are restricted to graduate students. See the *Graduate Studies Bulletin* for course descriptions.

HOME MANAGEMENT AND FAMILY ECONOMICS

Clure, Rose, Trullinger

Home Economics 317 *Consumer Information*

(3-0) 3 Cr.

Study of motives in consumption; family incomes and expenditures, selection of commodities and services; buying and selling practices. Evaluation of consumer aids and investigation of local situations.

Home Economics 318 *Family Health and Home Nursing*

(1-2) 2 Cr.

Necessary factors in maintaining the health of the family. Includes the Red Cross course in Home Care of the Sick. Students earn Red Cross certificate.

Home Economics 333 *Home Equipment and Applied Physics*

(2-2) 3 Cr.

General laws and principles of physics as applied particularly to household appliances and the home. The selection, operation, uses, and care of home equipment.

Home Economics 400 *Demonstration Techniques* (0-4) 2 Cr.

Prerequisite: H.E. 230

The application of demonstration principles in planning and presenting all types of demonstrations.

Home Economics 403 *Home Management* 4 Cr.

Prerequisite: H.E. 308

Management of family resources for the attainment of successful family life, social aspects and adjustments of group and family living. Residence in one of the home management houses with homemaking and managerial experiences.

Home Economics 428 *Family Economics* 2 Cr.

Prerequisite: S.S. 201

Study of management in relation to personal and family finance. Emphasis upon practical applications for young adults in such areas as budgeting income and expenses, planning adequate insurance, financing a home, and providing for savings and investments.

INDUSTRIAL EDUCATION

Many courses in this group are scheduled on the quarter or nine-week basis and meet daily. Due to the variation in the types of content included in these courses, the following tabulation is given to indicate the time requirements for credits. Figures in parentheses indicate approximate hours in preparation.

1 hour per week	(2)	18 weeks	1 semester hour
2 hours per week	(1)	18 weeks	1 semester hour
3 hours per week	(0)	18 weeks	1 semester hour
6 hours per week	(0)	9 weeks	1 semester hour
10 hours per week	(2)	9 weeks	2 semester hours
12 hours per week	(0)	9 weeks	2 semester hours

GENERAL

Face, Jarvis, Kranzusch, Price, Sampson

Industrial Education 100 *Orientation* 0 Cr.

Admission requirements, program operation, attendance regulations, credits, scholastic measurement. Analysis of characteristics of a good performance in shop or drafting courses, in professional courses, in academic courses, and as a teacher. Personnel problems in physical, social, and mental phases. Curriculum opportunities, professional requirements, trend in requirements in calls for teachers. Significance of choices available.

Industrial Education 253 *General Shop I (Crafts)* Qr. (0-10) 2 Cr.

Prerequisite: Sophomore standing

Related information and basic operations in plastic, leather, and metal crafts. Provision for creative expression with above materials.

Industrial Education 365 *General Shop II* Qr. (0-10) 2 Cr.

Prerequisite: Junior standing

Provides experiences in solving teaching problems, examples in good pedagogical practices, and experiences in project development pertaining especially to teaching general industrial education courses.

Industrial Education 425 *Industrial Arts for Elementary Teachers*

Qr. (0-10) 2 Cr.

Development, philosophy, objectives, and course organization for industrial arts for the elementary school. Suitable laboratory work in woods, metals, plastics, and drawing.

Industrial Education 490 *Technical Field Experience* (Qr) 2-6 Cr.

Prerequisite: Consent of department head and dean

Advanced work in technical major. Attendance at industrial schools usually scheduled during summer sessions. Report required.

I.E. 542 Advanced Technical Problems—General Shop is restricted to graduate students. See the *Graduate Studies Bulletin* for course description.

ELECTRICITY

Ortley, Ruehl, Spinti

Industrial Education 206 *Electricity* Qr. (0-10) 2 Cr.

Fundamentals of electricity including the theory and laws for direct and alternating current circuits. Generation and distribution of A.C. power. Principles of electric motors.

Industrial Education 343 *Electronics* Qr. (0-10) 2 Cr.

Prerequisite: I.E. 206

Fundamentals of vacuum tubes and semiconductors. Circuit analysis and study of power supplies and audio amplifiers. Public address equipment such as microphones, tape input units, record players, and speaker systems are studied.

Industrial Education 345 *Industrial Electricity* Qr. (0-10) 2 Cr.

Prerequisite: I.E. 206

Characteristics of alternators and generators. A study of control circuits for motors and generators. Three phase power transformer connections. Residential wiring. Auxiliary power supplies, inverters, converters, and servo-synchro systems.

Industrial Education 347 *Radio I (AM-FM)* Qr. (0-10) 2 Cr.

Prerequisite: I.E. 343

Transmission, propagation, and reception of amplitude and frequency modulated radio waves. Antenna types and methods of coupling. Superhetro-dyne receivers with accessory circuits such as B.F.O. and tuning indicators.

Industrial Education 357 *Radio II (T.V.)* Qr. (0-10) 2 Cr.

Prerequisite: I.E. 347

Transmission and reception of monochromatic and color T.V. signals. Antenna types for VHF and UHF signals. Wired high frequency distribution systems. Closed circuit television equipment.

Industrial Education 439 *Industrial Electronics* Qr. (0-10) 2 Cr.

Prerequisite: I.E. 343

Analysis of electronic circuits as applied to control of industrial processes. Circuits such as timing, heating, counting, measuring, speed control, and other special purpose circuits are studied and tested. Aircraft electronic control circuits are presented for analysis.

I.E. 544 Advanced Technical Problems—Electricity is restricted to graduate students. See the *Graduate Studies Bulletin* for course description.

INDUSTRIAL GRAPHICS

Amthor, Anderson, Erickson, Siefert

Industrial Education 101 *Drafting* Qr. (0-10) 2 Cr.

Mechanical and freehand drafting techniques. Graphic representation emphasized in a number of industrial areas.

Industrial Education 201 *Design* Qr. (0-10) 2 Cr.

Prerequisite: Sophomore standing

A study and application of basic principles of design through creative use of various materials.

Industrial Education 226 *General Drafting* Qr. (0-10) 2 Cr.

Prerequisite: Sophomore standing

Drafting in general education. Problems in organizational patterns; flow sheets, operation diagrams, charts, graphs, and working drawings. Maps and field work. Electrical heating and plumbing diagrams.

Industrial Education 227 *Machine Drafting* Qr. (0-10) 3 Cr.

Prerequisite: I.E. 234

Analysis of machine parts and their functions. Technical sketching, measuring techniques, drafting conventions, and standard parts. Use of technical manuals, references, and handbooks.

Industrial Education 229 *Machine Drafting* Qr. (0-10) 2 Cr.

Prerequisite: I.E. 227

Analysis of motion, motion diagrams. Motion layout of threads, spur and bevel gears, worm and worm wheels, and cams.

Industrial Education 231 *Architectural Drafting* Qr. (0-10) 2 Cr.

Prerequisites: I.E. 101 and 201

Utilization of building site, analysis of family needs, sketching of floor plans, preliminary instrument drawings, and simple estimating.

Industrial Education 233 *Architectural Drafting* Qr. (0-10) 2 Cr.

Prerequisite: I.E. 231

Preparation of house plans to include plot plan, elevations, sectional details, and perspective. Preparation of plans for electrification, plumbing, and heating. Cost estimates.

Industrial Education 234 *Mechanical Drafting* Qr. (0-10) 2 Cr.

Prerequisite: I.E. 121

Advanced problems in projections, sections, limit dimensions, auxiliary views, intersections, surface finishes, and developments.

Industrial Education 265 *Descriptive Geometry* Qr. (0-10) 2 Cr.

Prerequisite: I.E. 121

The representation of points, lines, and planes in relative positions. Intersections of lines with plane surfaces, intersections of surfaces, size and shape of plane areas, and the development of curved surfaces.

Industrial Education 326 *Topography* Qr. (0-10) 2 Cr.

Prerequisite: I.E. 101

Collect data from field work. Record, calculate, and convert field notes in the laboratory on maps, profiles, and land descriptions.

Industrial Education 329 *Machine Drafting* Qr. (0-10) 2 Cr.

Prerequisite: I.E. 229

Production assembly drawings, inspection procedure, parts listing. Bill of Bars, corrections and revisions, jigs and fixtures, indexing and coding procedures.

Industrial Education 331 *Architectural Drafting* Qr. (0-10) 2 Cr.

Prerequisite: I.E. 233

Advanced residential planning; FHA standards; national, state, local codes; problem solving by construction of models, individual research, and field trips.

Industrial Education 431 *Architectural Drafting* Qr. (0-10) 2 Cr.

Prerequisite: I.E. 331

Preparation of plans for commercial or public building. Sketching and instrument drawings, rendering, and reference to building codes.

Industrial Education 433 *Machine Drafting* Qr. (0-10) 2 Cr.

Prerequisite: I.E. 329

Analysis of patent drafting; technical and legal consultation; preliminary sketch and drawings; indentures, expressions, and final drafts.

I.E. 541 Advanced Technical Problems—Industrial Graphics and I.E. 563 Design in Industrial Education are restricted to graduate students. See the *Graduate Studies Bulletin* for course descriptions.

METALS

Face, Gerber, Halfin, Klatt, Kufahl, Wiehe

- Industrial Education 102 *Metals* Qr. (0-10) 2 Cr.
Technical information and fundamental operations in machine shop. Exploratory experiences in welding, sheet metal, and foundry.
- Industrial Education 210 *Sheet Metal* Qr. (0-10) 2 Cr.
Prerequisite: I.E. 102
Fundamental machine and hand tool operations, soldering, pattern development, and related information. Discussions on manufacturing and purchasing of equipment and supplies.
- Industrial Education 235 *Machine Shop* Qr. (0-10) 2 Cr.
Prerequisite: I.E. 102
Sharpening of lathe tools and milling cutters. Grinding externally, internally, flat surfaces, and with tool post grinder; gear cutting on the milling machine; thread cutting and boring on a lathe; layout techniques; heat treating.
- Industrial Education 237 *Machine Shop* Qr. (0-10) 2 Cr.
Prerequisite: I.E. 235
Designing, planning, and building projects involving both basic and advanced machine tool operations. Tool making problems.
- Industrial Education 239 *Sheet Metal* Qr. (0-10) 2 Cr.
Prerequisite: I.E. 210
Advanced pattern development involving parallel line, radial line, and triangulation. Shop practice in sheet metal work. Care and maintaining of sheet metal equipment.
- Industrial Education 241 *Sheet Metal* Qr. (0-10) 2 Cr.
Prerequisite: I.E. 210
Cabinet work involving direct layout, with extensive work on the cornice brake. Spot welding, air gun riveting. Study, selection, and purchasing of supplies.
- Industrial Education 243 *Foundry* Qr. (0-10) 2 Cr.
Instructional units in molding applied in bench, floor, and mold; core making. Melting and pouring brass and aluminum.
- Industrial Education 330 *Winter Air Conditioning* Qr. (0-10) 2 Cr.
Prerequisite: I.E. 210
Principles of heating, heat energy, heating systems, calculation of heating loads, heating drawings, burners, and control systems.
- Industrial Education 333 *Art Metal* Qr. (0-10) 2 Cr.
Prerequisites: I.E. 102 and junior standing
Operations in raising, forming, stretching, shrinking, spinning, chasing, seaming, etching, coloring. Projects using copper, brass, and aluminum. Silver and aluminum brazing. Related topics.

Industrial Education 335 *General Metal* Qr. (0-10) 2 Cr.

Prerequisites: I.E. 102 and sophomore standing

General shop of the trade group type. Organization layout, equipment, management, uses of instructional material, selected projects in arc welding, forging, heat treating, machine shop, oxyacetylene welding and cutting.

Industrial Education 355 *General Metal* Qr. (0-10) 2 Cr.

Prerequisite: I.E. 335

Advanced work in arc welding, oxyacetylene welding, and heat treating. Study of new machines, tools, metals, and manufacturing.

Industrial Education 435 *Machine Shop* Qr. (0-10) 2 Cr.

Prerequisite: I.E. 237

Problems in tool making, selection of appropriate instructional tools and materials. Student demonstrations.

Industrial Education 455 *Oxyacetylene Welding* Qr. (0-10) 2 Cr.

Prerequisite: Junior standing

Operation of manifolds, tanks, gauges, and torches. Welding of all common metals; hand and machine cutting of steel; testing and checking; technology of materials.

Industrial Education 457 *Electric Arc Welding* Qr. (0-10) 2 Cr.

Prerequisite: Junior standing

Characteristics and operation of several kinds of arc welding equipment. Preparation of joints, striking and manipulation of the arc in various weld positions, welding of the common metals, symbols, types of electrodes, hand and machine cutting, destructive and non-destructive testing of welds.

Industrial Education 461 *Tool and Die Making* Qr. (0-10) 2 Cr.

Prerequisites: I.E. 237, and, for graduate students, Ed. 501

Operations and related technical information units for selecting examples of single station cutting dies; drawing, expanding, non-cutting, assembling, progressive, and finishing dies; permanent molds. Layout work, methods of fabrication, and machine tool operations involved planned by the student.

Industrial Education 462 *Maintenance of Machine Shop Laboratory Equipment* Qr. (0-10) 2 Cr.

Prerequisites: I.E. 235 and 455

Practice in installation, preventive maintenance, and repair of machine tool equipment. Sharpening of cutting tools; maintaining an adjustment and lubrication schedule; ordering repair parts and supplies; storage and arrangement of tools and supplies.

I.E. 545 Advanced Technical Problems—Metals is restricted to graduate students. See the *Graduate Studies Bulletin* for course description.

PHOTOGRAPHY

Barnard, McMurtrie

Industrial Education 205 *Elementary Photography* Qr. (0-10) 2 Cr.

Picture taking, film developing, printing, and enlarging. Basic technical skills and composition emphasized. Each student required to provide camera and photographic film.

Industrial Education 405 *Advanced Photography* Qr. (0-10) 2 Cr.

Prerequisite: I.E. 205

Advanced techniques in monochromatic photography and the fundamentals of color photography including color film development and color printing. Students required to provide suitable cameras.

POWER MECHANICS

Daines, Morical

Industrial Education 202 *Mechanics* Qr. (0-10) 2 Cr.

Principles of construction, care, and use of basic tools and machines. Units of instruction in power sources and devices, transmissions, clutches, cams, bearings, gears, and pumps.

Industrial Education 242 *General Motor Mechanics* Qr. (0-10) 2 Cr.

Internal combustion engines. Suspensions and steering, fuel systems, carburetion, ignition systems, servicing, adjusting, or repairing units of the chassis.

Industrial Education 245 *Auto Mechanics* Qr. (0-10) 2 Cr.

Prerequisites: I.E. 113 and 119

Repair of the automobile body and accessories. Fender and body repairing, refinishing, interior trim repairing, wheel alignment, wheel balancing.

Industrial Education 247 *Auto Mechanics* Qr. (0-10) 2 Cr.

Prerequisite: I.E. 202 or 242

Auto and small two and four cycle engine rebuilding; servicing and repairing engine accessories. Reborring and honing cylinders; fitting pistons, rings, and piston pins; grinding, seating, and testing valves; repairing and adjusting carburetors.

Industrial Education 341 *Auto Mechanics* Qr. (0-10) 2 Cr.

Prerequisites: I.E. 202 and 206

Principles of operation, adjustments and repair of the various types of circuits, operation, units, and storage batteries. Testing lighting circuits, generators, voltage regulators, distributors. Diagnosing, locating, and repairing electrical troubles on live cars.

Industrial Education 451 *Auto Mechanics* Qr. (0-10) 2 Cr.

Prerequisite: Senior standing

Equipment and management problems for prospective teachers of auto mechanics. Practice in installation, preventive maintenance, and repair of diagnostic equipment and machines. Selecting, acquiring, and organizing teaching material.

I.E. 547 Advanced Technical Problems—Power and Transportation is restricted to graduate students. See the *Graduate Studies Bulletin* for course description.

PRINTING

Axelsen, Gray, Schemansky, Whydowski

Industrial Education 117 *Printing* Qr. (0-10) 2 Cr.

Basic fundamentals of printing processes. Elements of composition, imposition, platen presses, block cutting, silk screen, mimeographing, spirit duplicating, and binding.

Industrial Education 255 *Advanced Printing* Qr. (0-10) 2 Cr.

Prerequisite: I.E. 459

Problems in composition, stonework, platen press work, and binding. Introduction to commercial problems and jobs; typographical design.

Industrial Education 257 *Machine Composition* Qr. (0-10) 2 Cr.

Prerequisite: I.E. 255 and consent of department head

The mechanism, care, and operation of linecasting machines. Keyboard operation and mechanical adjustments.

Industrial Education 259 *School Publications* Qr. (0-10) 2 Cr.

Prerequisite: E. 102b

Production of school newspapers, magazines, and annuals. Elements of journalism and the application from the viewpoint of the adviser. *The Stoutonia*, the college weekly newspaper, used as laboratory.

Industrial Education 351 *Printshop Mechanics* Qr. (0-10) 2 Cr.

Prerequisites: I.E. 255 and 376

Adjustment and care of machines in the school and job shop.

Industrial Education 359 *Cooperative Industrial Printing I or II*

Prerequisites: I.E. 255 and 376

Qr. (0-10) 2 Cr.

Production at the college press under shop conditions. One hundred clock hours of actual production experience in college press required for two semester hours of credit:

Industrial Education 361 *Printing Design* Qr. (0-10) 2 Cr.

Type design, commercial layouts, colors, papers, cover design, folders, and booklets. Application of design in printing.

Industrial Education 363 *General Graphic Arts* Qr. (0-10) 2 Cr.

Basic reproductive processes in graphic arts. Wood and resilient block cutting, lithography, etching, silk screen, engraving, and bookbinding.

Industrial Education 370 *General Bookbinding* Qr. (0-10) 2 Cr.

Prerequisite: I.E. 363 or consent of department head

Basic fundamentals of the binding and repair of books. Instruction in the making of binding equipment and the use of materials obtained from local sources.

Industrial Education 374 *Offset Lithography* Qr. (0-10) 2 Cr.

Fundamentals of offset lithography including units in camera work, plate making, and press work.

Industrial Education 376 *Advanced Lithography* Qr. (0-10) 2 Cr.

Prerequisite: I.E. 374

Continuation of I.E. 374. Preparation of intricate copy, stripping of negatives in plate making, and preparation of copy for multiple color work.

Industrial Education 449 *Printing Economics* Qr. (0-10) 2 Cr.

Shop organization and management, purchasing of equipment and supplies, shop layouts, and cost estimations.

Industrial Education 459 *Presswork* Qr. (0-10) 2 Cr.

Operation and adjustment of platen and cylinder presses, automatic feeders, lockup, imposition, and makeready. Printability of papers, inks, and engravings. Operation and adjustment of bindery equipment.

I.E. 543 Advanced Technical Problems—Graphic Arts is restricted to graduate students. See the *Graduate Studies Bulletin* for course description.

WOOD TECHNICIS

Dyas, Olsen, Piersall, Prichard, Soderberg, Swanson

Industrial Education 103 *Woodworking* Qr. (0-10) 2 Cr.

Job planning, technical information, and fundamental operations in hand and machine woodworking, and wood finishing.

Industrial Education 131 *Machine Woodworking* Qr. (0-10) 2 Cr.

Prerequisite: I.E. 103

Technical information, job planning, fundamental principles of machine woodworking. Mass production in woodworking emphasized.

Industrial Education 203 *Plastics* Qr. (0-10) 2 Cr.

Job planning, technical information, and operations in plastics, including compression molding, injection molding, foaming, thermoforming, casting, laminating, and fabricating thermosets and thermoplastics.

Industrial Education 209 *General Finishing* Qr. (0-10) 2 Cr.

Prerequisite: I.E. 103

Technical information and application of finishes to various materials. Color theory, spraying, baking, drying, polishing, spot finishing, and refinishing.

Industrial Education 215 *Cabinet Work I* Qr. (0-10) 2 Cr.

Prerequisite: I.E. 311

Must be taken in conjunction with I.E. 312. Problem solving, testing of materials, and advanced technical information. Student designs major project, develops job plan and evaluation devices, and begins project construction.

Industrial Education 219 *Building Construction I* Qr. (0-10) 2 Cr.

Prerequisite: I.E. 103

Technical information and problems in building construction. Actual construction of fundamental components. Elementary roof framing.

Industrial Education 221 *Painting and Decorating* Qr. (0-10) 2 Cr.

Prerequisite: I.E. 209

Application of color theory, color mixing, graining, stenciling, marbling, mottling, stippling, spot finishing, texturing, dry wall construction, and other wall finishes.

Industrial Education 225 *Patternmaking I* Qr. (0-10) 2 Cr.

Prerequisite: I.E. 103

Application of patternmaking principles, using wood, wax, plaster, and plastic materials for foundry and plastics work.

Industrial Education 311 *Design in Wood* Qr. (0-10) 2 Cr.

Prerequisite: I.E. 103

Product design and development, group work in designing and mass producing a product.

Industrial Education 312 *Cabinet Work II* Qr. (0-10) 2 Cr.

Prerequisite: I.E. 215

Must be taken in conjunction with I.E. 215. Advanced problem solving and technical information. Making of jigs and fixtures. Demonstrations of machine operations by class members. Completion of project begun in I.E. 215

Industrial Education 316 *General Woodworking* Qr. (0-10) 2 Cr.

Prerequisite: I.E. 103

General unit shop organization. Upholstery, carpentry, and wood turning. Experience in organization and presentation of content in woodworking as it relates to the total industrial arts program.

Industrial Education 319 *Building Construction II* Qr. (0-10) 2 Cr.

Prerequisite: I.E. 219

Technical information and problems in building construction with emphasis on exterior materials and components and advanced roof framing.

Industrial Education 325 *Patternmaking II* Qr. (0-10) 2 Cr.

Prerequisite: I.E. 225

Production pattern design for foundry and plastics work. Experimental construction.

Industrial Education 421 *Building Construction III* Qr. (0-10) 2 Cr.

Prerequisite: I.E. 319

Technical information and problems in interior finishing with emphasis on cabinet components and stair construction.

Industrial Education 440 *Plastics II* Qr. (0-10) 2 Cr.

Prerequisite: I.E. 203

Technical information and product development. Construction of molds and forms for molding, casting, laminating, foaming, and thermoforming.

Industrial Education 464 *Tool and Machine Conditioning*

Prerequisite: I.E. 103

Qr. (0-10) 2 Cr.

Technical information on woodworking equipment, cutting theory, safety, and shop organization. Maintenance of woodworking machines, saw fitting, and general hand tool fitting.

I.E. 546 Advanced Technical Problems—Woodworking is restricted to graduate students. See the *Graduate Studies Bulletin* for course description.

INDUSTRIAL TECHNOLOGY

Ganzemiller, Sampson, Sommers

Industrial Education 290 *Industrial Management* 2 Cr.

Introduction to the problems and elements of industrial management.

Industrial Education 400 *Quality Control* 2 Cr.

Prerequisite: I.E. 290

Establishment of quality standards, inspection principles, and organization; application of sampling methods and theory; corrective action.

Industrial Education 408 *Cooperative Industrial Assignment* 2 Cr.

Prerequisite: I.E. 290, Industrial Technology major, and completion of ninety-six credits

Supervised employment in industry. Assignments individually arranged by Stout State College and the cooperating industry. Written reports required.

Industrial Education 410 *Production Control* 2 Cr.

Prerequisite: I.E. 290

Introduction to industrial plant operation; production planning and control. Forecasting, inventory control. Production requirements; routing, scheduling, and coordination of production.

Industrial Education 420 *Time and Motion Study* Qr. (2-4) 2 Cr.

Prerequisite: I.E. 290

Introduction to methods improvement in industry including developing better methods, process analysis, activity charting, operation analysis. Micromotion study. Fundamental hand motions, motion economy, determining standard times, work sampling, operator training, and evaluating and controlling factors.

LIBERAL ARTS AND SCIENCES

ART

Boppel, Vanek, Williams, Wilson

A minor in Art consists of 22 semester hours. Required courses are A. 106 or I.E. 201, A. 200, A. 300, A. 400, A. 431, and A. 470. At least four credits will be selected from A. 206, A. 332, A. 410, A. 424, A. 430, A. 440, A. 460, and I.E. 205. Additional courses will be selected from A. 334, A. 423, A. 436, A. 448, I.E. 209, I.E. 221, I.E. 231, I.E. 311, I.E. 361, I.E. 363 and I.E. 405. Education majors who are selecting the art minor are required to take A. 470 in addition to the 22 hours described above.

Art 106 *Fundamentals of Design* (0-6) 3 Cr.

Application of design principles and color theory through creative use of various materials such as crayon, metal, paint, paper, plastic, and wood.

Art 200 *Beginning Drawing* (0-6) 3 Cr.

A basic concern for perspective and composition, stressing creative expression, observation, and memory training.

Art 206 *Art Appreciation* (2-0) 2 Cr.

Development of critical judgment in evaluation of traditional and contemporary art forms; appreciation of art as an enrichment of everyday life; visual aids and field trips to galleries and shops.

Art 300 *Beginning Painting* (0-6) 3 Cr.

An emphasis on the use of color, drawing, and design in the development of a personal form of expression; opaque and transparent media.

Art 332 *Advanced Design* (0-6) 3 Cr.

Prerequisite: A. 106

Further application of art principles; decorating by batik, blockprinting, silk-screen, stencil; presenting educational and commercial displays attractively.

Art 334 *Home Furnishing* (1-4) 3 Cr.

Prerequisite: A. 106

Problems involving selection of home furnishings; color, design, and materials as they apply to home planning; development of consumer discrimination.

Art 400 *Crafts* (0-6) 3 Cr.

Prerequisite: A. 106

Creative design and construction in media such as ceramics, jewelry, and weaving.

Art 410 *Pottery* (0-6) 3 Cr.

Introduction to ceramic design and construction; pinch, slab, coil and wheel methods emphasized.

Art 423 *Problems in Home Furnishing* (0-4) 2 Cr.
Directed experiences in special problems related to design, construction, and arrangement.

Art 424 *Weaving* (0-4) 2 Cr.
Prerequisite: A. 106
Loom warping and weaving simple patterns concluding with woven projects.

Art 430 *Art History From Ancient Through Medieval* (3-0) 3 Cr.
A cultural analysis of the interrelated fields of architecture, painting, sculpture, and the minor arts from ancient through medieval with emphasis on Egyptian, Greek, Roman, early Christian, and Gothic periods.

Art 431 *Art History From the Renaissance Through Contemporary* (3-0) 3 Cr.
A cultural analysis of the interrelated fields of architecture, painting, sculpture, and the minor arts from medieval times to the present.

Art 436 *Costume Design* (0-4) 2 Cr.
Prerequisite: H.E. 218
Development of original designs for costumes, based on study of design sources.

Art 440 *Jewelry* (0-4) 2 Cr.
Prerequisite: A. 106
Introduction to jewelry design and construction in clay, wood, copper, enamel, plastic, and precious metals.

Art 448 *Housing* (1-4) 3 Cr.
Housing as applied to community, lot, home, and family; problems in cost, construction, housing materials, and architectural designing.

Art 460 *Creative Art* (0-4) 2 Cr.
Prerequisite: A. 106
Creating through experimentation in various art media such as paper, paint, plastic, wood, and metal.

Art 470 *The Teaching and Supervision of Art* (2-0) 2 Cr.
Prerequisite: Senior standing
Basic types of art expression as a foundation for teaching methods adjusted to age and ability groups; experience in selecting, evaluating, and organizing material for teaching units and projects.

A. 556 Seminar in Art is restricted to graduate students. See the *Graduate Studies Bulletin* for course description.

ENGLISH AND JOURNALISM

English

Brown, Byrns, Chambers, Friedrich, Kelly, Peters, Phelps, Rathke, Sather,
Walley

A minor in English consists of 22 semester hours. Required courses are E. 346, E. 348, and E. 400a and b. Additional English courses, excluding E. 102a and b, will be selected; E. 102a (Honors) and E. 102b (Honors) may be included. One course in journalism, either E.306 or E. 410, and one course in speech, either Sp. 320, 340, or 444, may be included.

English 102a *English Composition* 3 Cr.

A basic course designed to train students in effective use of English. Emphasis on sentence and paragraph construction.

English 102b *English Composition* 3 Cr.

A continuation of E. 102a. Designed to increase effectiveness in writing. History of the English language and vocabulary study. Emphasis on techniques and preparation of the research paper, including taking notes, making bibliography, organizing and limiting material, and acknowledging sources by proper documentation.

English 102a (Honors) *English Composition* 3 Cr.

Prerequisite: Departmental selection on basis of ability
Reading extensively in works of thirty writers from Plato to Freud and writing related to the reading.

English 102b (Honors) *English Composition* 3 Cr.

Prerequisite: Departmental selection on basis of ability
Continuation of E. 102a (Honors). Intensive study of writings of ten authors. Each student writes a documented critical analysis of a defined aspect of one writer's work.

English 216 *English Literature* 3 Cr.

Prerequisite: E. 102b
A short survey of English prose and poetry.

English 346 *Expository Writing* 3 Cr.

Prerequisite: E. 102b
The writing of short reports, definitions, directions, book reviews, and a documented investigative paper.

English 348 *American Literature* 3 Cr.

Prerequisite: E. 102b
A chronological survey of American prose and poetry from Franklin to Frost.

English 400a *English Literature* 3 Cr.

Prerequisite: E. 102b
Concentrated chronological survey of English prose and poetry from Beowulf to 1798.

English 400b *English Literature* 3 Cr.

Prerequisite: E. 216 or 400a

Concentrated chronological survey of English prose and poetry from 1798 to the present.

English 402 *Fiction* 3 Cr.

Prerequisite: E. 102b

An understanding of fiction achieved through the reading and discussion of representative novels of the nineteenth and twentieth centuries.

English 404 *Poetry* 2 Cr.

Prerequisite: E. 102b

Works of representative American and English poets of the late nineteenth and twentieth centuries.

English 406 *Shakespeare* 2 Cr.

Prerequisite: E. 102b

Representative plays of Shakespeare. Critical study of sixteen plays.

Journalism

Phelps

A minor in journalism consists of 22 semester hours. Required courses are E. 306, E. 410, E. 425, Ed. 479, I.E. 117, I.E. 205, and E. 415 or E. 416. Additional courses will be selected from A. 106, E. 216, E. 348, I.E. 259, I.E. 361, I.E. 449, S.S. 311, S.S. 407, S.S. 410, S.S. 411, S.S. 417, and Sp 470.

English 306 *Reporting and News Writing* 2 Cr.

Prerequisite: E. 102b

Theory and practice of news gathering and reporting, journalistic style, copy and proof reading. Discriminative newspaper reading; the history of journalism, libel.

English 410 *Writing and Selling Feature Articles* 2 Cr.

Prerequisite: E. 102b

Practice in techniques of writing and selling feature articles for appropriate markets. Students are required to submit articles for potential publication.

English 415 *Technical Writing for Home Economics* 3 Cr.

Prerequisite: E. 346 or consent of instructor

An overview of specialized writing done by home economists in business. Experience in preparing reports, letters, and other appropriate materials.

English 416 *Technical Writing for Industry* 3 Cr.

Prerequisite: E. 346 or consent of instructor

A survey of the type of writing current in industry. Writing of business reports and other materials.

English 425 *Copy Editing and Preparation* (Qr.) 2 Cr.

Prerequisite: I.E. 117 or consent of instructor

Development of skill in expanding and reducing written materials. Experience in copy reading, proof reading, headlines.

Education 479 *Public Relations* 2 Cr.

Defines the publics, objectives, and media of public relations in industry and education. Provides practice with such tools as news stories and features. Each student carries out an actual publicity program in the community.

FOREIGN LANGUAGES

Larson

French 101a *Elementary French* 4 Cr.

Introduction to the study of the language; reading, writing, composition, and special emphasis on conversation.

French 101b *Elementary French* 4 Cr.

Continuation of Fr. 101a.

Spanish 101a *Elementary Spanish* 4 Cr.

Introduction to the study of the language; reading, writing, composition, and special emphasis on conversation.

Spanish 101b *Elementary Spanish* 4 Cr.

Continuation of Span. 101a.

MATHEMATICS

Gauthier, Harbour, Kubly, Maki, Reneson, Rue

A minor in mathematics consists of 22 semester hours. Required courses are the M. 250a and b and 315a and b sequence or the 260a b, and c sequence. Additional mathematics courses, excluding M. 209 and M. 213, will be selected.

Mathematics 100 *Fundamentals of Algebra* 0 Cr.

Review of the fundamentals of algebra.

Mathematics 209 *College Algebra* 4 Cr.

Fundamental operations and problems in college algebra, including logarithms and the slide rule.

Mathematics 210 *College Algebra* 2 Cr.

Prerequisite: M. 209

Continuation of M. 209 beginning with quadratics and continuing through the binomial theorem, progression, inequalities, probability, determinants, and permutations and combinations.

Mathematics 213 *Trigonometry*

3 Cr.

Prerequisite: M. 209

Introduction to the elements of trigonometry and the solution of the right and oblique triangle. Slide rule and logarithmic calculations in solving practical problems. One field problem in the use of the transit.

Mathematics 216 *College Geometry*

(Qr.) 2 Cr.

Prerequisite: M. 213, or 250b, or 260c

Classical and constructive treatment of selected material to provide experience in giving independent demonstrations. Two and three dimensional figures, linkage instruments, and spherical geometry.

Mathematics 250a *Mathematical Analysis*

4 Cr.

Prerequisite: Satisfactory score on proficiency test

Nature of mathematics, the number system, algebraic expressions. Exponents and radicals, sets and matrices, inequalities, permutations, combinations and probability. Not open to students who have completed M. 260a, b, and c.

Mathematics 250b *Mathematical Analysis*

4 Cr.

Prerequisite: M. 250a

Algebraic, exponential, logarithmic, and trigonometric functions. Analytic geometry. Intuitive calculus.

Mathematics 260a *Calculus and Analytical Geometry*

5 Cr.

Prerequisite: Satisfactory score on proficiency test

A review of real numbers, inequalities, absolute values, intervals, continuity, from algebra continuing into a study of analytical geometry of the plane and beginning the study of limits, functions, and the derivative of algebraic functions. Not open to students who have completed M. 250a and b.

Mathematics 260b *Calculus and Analytical Geometry*

5 Cr.

Prerequisite: M. 260a

Elaboration and application of the derivative and the definite integral. Study of conic sections and other algebraic curves. Development of the calculus for special classes of functions: rational, algebraic, circular, exponential, trigonometric, and techniques of formal integration.

Mathematics 260c *Calculus and Analytical Geometry*

5 Cr.

Prerequisite: M. 260b

Review of formal integration, parametric equations, polar representation, Simpson's Rule, Cauchy's Formula, Taylor's Theorem, infinite series, solid analytical geometry, vectors, partial differentiation, and multiple integration.

Mathematics 314 *Analytical Geometry*

3 Cr.

Prerequisite: M. 213

Algebraic treatment of geometry. A graphical analysis of the straight line, the circle, and conic sections in general. Not open to students who have completed M. 250a and b or M. 260a, b, and c.

Mathematics 315a *Calculus*

4 Cr.

Prerequisite: M. 314 or 250b

A study of functions, limits, continuity, bounds, sets, the derivative of a function, applications of the derivative, and the derivative applied to the trigonometric function, the inverse trigonometric function, and the exponential and logarithmic functions. Not open to students who have completed M. 260a, b, and c.

Mathematics 315b *Calculus*

4 Cr.

Prerequisite: M. 315a

Continuation of M. 315a beginning with antiderivative and continuing with integration taking up the techniques, theory, and applications. Additional topics in calculus.

Mathematics 320 *Differential Equations*

3 Cr.

Prerequisite: M. 315b or 260c

A study of the more common types of ordinary differential equations of the first and second orders, linear equations with constant coefficients, series solutions, numerical approximations, partial differential equations, and systems of ordinary equations.

Mathematics 325 *Modern Algebra*

3 Cr.

Prerequisite: M. 315b or 260c

Logical derivation of abstract algebra including the elementary theory of equations. A modern development of groups, fields, and rings.

Mathematics 400 *Mathematical Statistics*

3 Cr.

Prerequisite: M. 315b or 260c

The mathematical treatment of statistical data including frequency distribution, probability, probability distributions, binomial distributions, Poisson distribution, normal distribution, and sampling techniques and treatment.

MUSIC

Odegard

The objective of the Stout music department is to provide musical experience and opportunities for the development of understanding and appreciation of music. The study of this art not only enhances intellectual acumen but also provides aesthetic enjoyment and aids in the development of social coordination through group effort. The organizations seek to further the interests of musical culture and entertainment and to enhance the spirit and character of the college.

The organizations are open to any student in the college who can qualify and may be taken for credit or participated in as activities. All students are invited to attend concerts and may elect music courses and organizations for college credit.

Music 134 *Rudiments of Music*

1 Cr.

An integrated survey course in the fundamentals of musicianship. Sol-feggio, practical harmony, history, notation, conducting, arranging, basic principles of music education, acoustics, appreciation, and aesthetics.

Music 153a *Music Appreciation*

2 Cr.

The materials of music as they pertain to perceptive listening. Study is related to the music of the nineteenth century. Seeks to lead the student to a significant awareness of great music.

Music 153b *Music Appreciation*

2 Cr.

Prerequisite: Mu. 153a

The materials of music are continued in relation to the music of periods not covered in Mu. 153a with emphasis on the twentieth century and the American scene.

Music 165 *Glee Club*

0 Cr.

Testing and classification of voices, basic principles of good choral technique. Provides the training necessary for membership in the Symphonic Singers.

Music 166 *Marching Band* $\frac{1}{2}$ Cr. per Qr.

Prerequisite: Satisfactory high school record in instrumental music

Fundamentals of marching and playing. Performance at all parades and football games. Marching band is allowed to substitute for P.E. during the year or years in which P.E. is required. The credit shall be P.E. credit and the grade given shall be an average of the first semester band grade and the second quarter P.E. grade. Men are limited to one half credit of P.E. credit in such a manner, women one credit.

Music 168a *Voice Class*

0 Cr.

Prerequisite: Mu. 165 or equivalent

Study of voice production, principles of singing and song materials.

Music 168b *Class Instruction in Band and Orchestra Instruments*

0 Cr.

Prerequisite: Mu. 166 or equivalent

A practical course in problems relating to embouchure, tone production, mechanics of the instrument, fingering and tonguing technique, and musicianship.

Music 234 *Advanced Topics of Music*

1 Cr.

Prerequisites: Mu. 134 and membership in Symphonic Singers or Concert Band.

A continuation of Mu. 134, with considerable freedom of specialization according to individual needs, interests, and ability.

Music 266 *The Stout Concert Band*

1 Cr. per year

Prerequisite: Mu. 166 or special audition

Fundamentals of musical expression, tone production and quality, and special problems of technique. Formal concerts and radio broadcasting. Each spring a group of about 100 instrumentalists and vocalists are selected for the annual spring tour.

Music 267 *The Stout Symphonic Singers* 1 Cr. per year

Membership by audition only. Advanced choral techniques, reading and analysis of choral music of all types and periods. Some work with instrumental accompaniment. Each spring a group of about 100 vocalists and instrumentalists are selected for the annual spring tour.

Music 268 *Solo and Ensemble* 1 Cr. per year

Prerequisites: Mu. 267 and approval of director

Coaching of advanced performers, both vocal and instrumental, for public performance and radio work.

Music 290 *Public School Music* 1 Cr.

Prerequisites: Mu. 234 and membership in Symphonic Singers

The fundamentals of public school music, with special emphasis on the methods, materials, and administration of music in the elementary and secondary school.

Music 100-200-300-400 *Applied Music* 0 or 1 Cr.

Prerequisite: Placement test

Private lessons available in voice and on brass, woodwind, string, and percussion instruments. Special fees for private lessons.

PHILOSOPHY

Blaug, Sather

Philosophy 101 *Introduction to Philosophy* 3 Cr.

Introduction to the various fields of philosophy, the history of philosophy, and the nature of philosophical investigations.

PHYSICAL EDUCATION AND COACHING

Men

Johnson, Mintz, Raarup, Sparger

If an excuse or deferment from P.E. is necessary for health reasons, the student must report to the college Health Service for temporary or permanent excuse. Permanent excuses must be filed in the Office of the Registrar as well as in the Office of Physical Education.

If a student, on his first entrance at Stout, requests exemption from the physical education program, such request must be made to the Dean of the School of Applied Science and Technology. Entering students over 21 years of age (at date of first entrance) are exempt from the physical education requirement. Transfer students must abide by the above regulation. Credit is extended on the basis of the student's transcript.

The P.E. requirement for any quarter can be met by becoming a bona-fide member of a regular athletic squad during that quarter. Registration cards must be made by all reporting for athletic competition for credit. Athletic competition does not supplant the swimming requirements.

Physical Education 101 *Personal Health*

1 Cr.

Personal and general hygiene for the improvement of living. Considers health in terms of life values. Standard First Aid Certificate of the American Red Cross granted.

Physical Education 127a *Physical Education I*

1 Cr.

Physical Education is required for all men for the first two semesters. Activities: beginning swimming, intermediate swimming, senior lifesaving, archery, basketball, speedball, touch football, calisthenics and physical proficiency tests, intercollegiate wrestling, football, and basketball.

Physical Education 127b *Physical Education II*

1 Cr.

Continuation of P.E. 127a. Activities: swimming, instructors' swimming, archery, basketball, badminton, bowling, table tennis, tumbling, gymnastics, volleyball, softball, calisthenics and physical proficiency tests, intercollegiate basketball, baseball, wrestling, golf, tennis, and track.

Physical Education 150 *Principles of Physical Education*

2 Cr.

The principles of physical education based on scientific facts and expression of educational ideals. Aims and objectives of physical education as applied to various school levels.

Physical Education 220 *Gymnastics*

2 Cr.

Elements of gymnastic tumbling and the use of gymnastic apparatus as a part of a modern program of physical education.

Physical Education 225 *First Aid and Athletic Training*

2 Cr.

Prerequisite: P.E. 101

Application of the principles and practice of the American Red Cross first aid; theory and practice of principles and techniques underlying athletic training and conditioning.

Physical Education 227 *Advanced Swimming*

2 Cr.

Prerequisite: P.E. 127b

Advanced swimming skills. American Red Cross Lifesaving and Water Safety Instructors' Course in the teaching of swimming and water safety.

Physical Education 325 *Recreational Leadership*

2 Cr.

Objectives, principles, methods, and content of a recreational program. Problems of facilities, equipment, and leadership. Organization and administration of a recreational program for various age levels.

Physical Education 350 *Individual and Dual Sports*

2 Cr.

History and theories of play. Rules and regulations of individual and dual sports. Badminton, tennis, table tennis, bowling, golf, archery, horse-shoes, and practice of the various skills.

Physical Education 450 *Organization and Administration of Physical Education* 2 Cr.

Prerequisite: P.E. 127b

The problems that arise in everyday experience of the instructor in physical education. The relationship of physical education to general education; objectives of physical education, utilization, planning and care of facilities and equipment; time allotment, classification of activities and children, leadership organization, supervision, routine procedures.

Physical Education 455 *Team Sports* 2 Cr.

Fundamentals and teaching knowledge of the following sports: touch football, soccer ball, field softball, speedball, volleyball, and games leading up to team sports.

Physical Education 460 *Coaching* 2 Cr.

Fundamentals and methods of teaching and coaching football and baseball. Specific techniques analyzed. Definite plan of offense and defense presented. Rules, practice schedules, fundamentals, theories, and their application.

Physical Education 470 *Coaching* " 2 Cr.

Fundamentals and methods of teaching and coaching basketball and track. Specific techniques analyzed. Definite plan of offense and defense presented. Rules, practice schedules, fundamentals, theories, and their application.

INTRAMURAL ATHLETICS

A complete program of all seasonal sports consisting of an "Athletics for All" aim is available to all students. Organized tournaments are conducted during the year in archery, badminton, basketball and basketball free throwing, bowling, fly and bait casting and spinning, trap and skeet shooting, golf, horseshoes, riflery, shuffleboard, softball, swimming, table tennis, tennis, touch football, volleyball, and track. Varsity letter winners are not eligible to participate in the sport in which they have lettered. The facilities and equipment of the Physical Education Department are available to students for recreation when there are no scheduled activities.

Women

Antrim, Erdlitz

Two years (8 quarters with a total of 4 credits) of physical education are required of students during their freshman and sophomore years. Freshmen must take one quarter of body building and one quarter of swimming. Sophomores must take one quarter of swimming. Each student is urged to select one individual sport to be used as a hobby during the junior and senior years and is encouraged to take one sport to be used in intramural competition.

Entering students over 21 years of age (at date of entrance) may be exempt from physical education requirements. Transfer students must abide by the above regulation. Credit is extended on the basis of the student's transcript.

If an excuse or deferment from physical education is necessary for health reasons, the student must report to the college Health Service for a permanent or temporary excuse. Permanent excuses must be filed in the Registrar's Office as well as in the Office of Physical Education.

Physical Education 128a *Physical Education I* 1 Cr.

Freshman women students may select two activities from the following offerings: body building, beginners' swimming, intermediate swimming, aerial tennis, badminton, deck tennis, field hockey, volleyball, shuffleboard, table tennis, and Red Cross senior lifesaving.

Physical Education 128b *Physical Education I* 1 Cr.

Freshman women students may select two activities from the following offerings: body building, beginners' swimming, intermediate swimming, archery, golf, basketball, rhythm, softball, tennis, pre-instructors' swimming, and Red Cross instructors' swimming.

Physical Education 228a *Physical Education II* 1 Cr.

Sophomore women students may select two activities from the following offerings: beginners' swimming, intermediate swimming, aerial tennis, deck tennis, badminton, bowling, field hockey, volleyball, shuffleboard, table tennis, Red Cross senior lifesaving.

Physical Education 228b *Physical Education II* 1 Cr.

Sophomore women students may select two activities from the following offerings: beginners' swimming, intermediate swimming, archery, basketball, bowling, rhythm, softball, tennis, golf, pre-instructors' swimming, Red Cross instructors' swimming.

RECREATION

The Women's Recreation Association is organized for the purpose of promoting recreational activities for all students on campus. Organized tournaments are conducted in many sports giving all members an opportunity to earn a emblem, pin, and letter. Social as well as corecreational and coeducational opportunities are made available to students through the W.R.A.

SCIENCE

Biology

Arneson, Dickmann, Lowry, Marshall

A minor in biology consists of 22 semester hours. Required courses are Sc. 122, Sc. 214, Sc. 306, Sc. 314, and Sc. 316. Additional courses will be selected.

Science 122 *General Biology*

(1-4) 3 Cr.

Plants and animals and their importance to human welfare. The fundamental structures that determine an organism's mode of life; origin, development, inheritance, distribution, and interrelationships of plants and animals.

Science 214 *Physiology and Anatomy*

(1-4) 3 Cr.

Prerequisite: Sc. 122

Human anatomy based on dissection of the cat and other laboratory material; fundamental physiological processes of all the organ systems; embryological development.

Science 306 *General Bacteriology*

(1-4) 3 Cr.

Structure and physiology of yeasts, molds, and bacteria. Growth requirements; methods used in culture and identification; introductory studies in bacterial analysis of water and milk; other problems in sanitation, food bacteriology.

Science 314 *Botany*

(2-2) 3 Cr.

Prerequisite: Sc. 122

An introduction to the structure and physiology of plants; survey of the plant kingdom; structure and life history of representative forms of plant life.

Science 316 *Zoology*

(2-2) 3 Cr.

Prerequisite: Sc. 122

Survey of the animal kingdom; structure and physiology of representative animals; principles of adaptation, evolution, and ecology.

Science 362 *Advanced Physiology*

(1-4) 3 Cr.

Prerequisites: Sc. 115 and 214

Physiological processes of digestion, respiration, metabolism, excretion, circulation, and muscle action. Histological and quantitative studies of blood; experiments on frog and turtle hearts; nerve and muscle preparations. Respiratory, nerve, circulatory, and muscle experiments on the human body.

Science 432 *Heredity and Eugenics*

2 Cr.

The essential principles of genetics and eugenics and their application to the human family. Physical, physiological, and mental traits in man; positive and negative eugenics and eugenics.

Science 442 *Community Hygiene*

2 Cr.

Disease prevention through education, sanitation, isolation, and immunization. Public health programs and operation of federal and state laws.

Science 450 *Ecology*

(2-2) 3 Cr.

Prerequisites: Sc. 314 and 316

Interrelationships of organisms with their physical and biotic environments.

Chemistry

Blake, Cox, Nitz, Owen

A minor in chemistry consists of 22 semester hours. Required courses are Sc. 115, Sc. 116, and Sc. 208. Additional chemistry courses will be selected.

Science 115 *Inorganic Chemistry* (2-6) 5 Cr.

The basic principles of inorganic chemistry; the important elements and compounds and their major applications to modern life.

Science 115 (Honors) *Inorganic Chemistry* (2-6) 5 Cr.

Prerequisite: Demonstrated competence in high school chemistry
A study of the principles of inorganic chemistry and the properties of important elements and compounds. Approach is more rigorous and coverage more extensive than in Sc. 115.

Science 116 *Inorganic Chemistry* (2-4) 4 Cr.

Prerequisite: Sc. 115

A continuation of Sc. 115. Detailed study of the elements, based upon the periodic table, includes chemical and physical properties, source and preparation, common compounds, industrial processes, and economic usage.

Science 208 *Organic Chemistry* (2-4) 4 Cr.

Prerequisite: Sc. 115

An introduction to the chemistry of carbon compounds with emphasis on the characteristic reactions of the several functional groups. Aliphatic and aromatic compounds are studied concurrently.

Science 322 *Biochemistry* (1-4) 3 Cr.

Prerequisites: Sc. 208 and 214

Digestion and metabolism of carbohydrates, fats, and proteins. Analysis of blood, urine, and other body fluids and tissues; nutritional significance of minerals, vitamins, enzymes, and hormones.

Science 436 *Qualitative Analysis* (1-4) 3 Cr.

Prerequisite: Sc. 115

The principles and practices of separating and identifying the common cations and anions.

Science 438 *Quantitative Analysis* (1-4) 3 Cr.

Prerequisite: Sc. 115

Introduction to the principles of quantitative chemical analysis and training in precision laboratory techniques.

Science 445 *Chemistry of Materials* (2-2) 3 Cr.

Prerequisite: Sc. 115

Composition, properties, and uses of common industrial and engineering materials: fuels and lubricants, iron and steel, non-ferrous metals and alloys, cement, paint and varnishes, synthetic rubber, and plastic.

Science 446 *Metallurgy*

(2-2) 3 Cr.

Prerequisite: Sc. 115

Properties of crystalline solids, production of iron and steel, the carbon-iron equilibrium diagram, principles of heat treatment, properties of ferrous alloys. Production, properties, and theory of the most important non-ferrous metals and alloys.

Physics

Harbour, Kubly, Reneson, Rue

A minor in physics consists of 22 semester hours. Required courses are Sc. 421, Sc. 423, Sc. 427, and Sc. 429. Additional physics courses will be selected; I.E. 439 Applied Electronics may be included.

Science 421 *Physics—Electricity, Heat, Mechanics*

(3-4) 5 Cr.

Prerequisite: M. 213 or 250b

General laws of physics in the fields of electricity, mechanics, and heat. Laboratory problems and demonstrations.

Science 423 *Physics—Sound, Light*

(2-2) 3 Cr.

Prerequisite: M. 213 or 250b

General laws of physics in the fields of sound and light. Acoustics, vision, lighting standards, lenses, optical instruments, polarization, and fluorescence.

Science 425 *Physics—Strength of Materials*

(2-2) 3 Cr.

Prerequisite: M. 213 or 250b

Fundamental theory of strength of materials. Analysis of tension, compression, shear, biaxial tension and compression, torsion, stresses and deflection of beams, statically indeterminate beams, and theory of columns.

Science 427 *Physics—Electronics*

Qr. (3-2) 2 Cr.

Prerequisite: Sc. 421

Theory and application of semi-conductors, vacuum and gas tubes. Basic principles of electronic circuits.

Science 429 *Physics—Modern Physics*

3 Cr.

Prerequisite: Sc. 421 and 423

Elements of atomic and nuclear physics and the industrial application of atomic energy.

Science 431 *Physics—Statics*

(2-0) 2 Cr.

Essential elements of statics including simple force systems, theory and application of non-concurrent forces, couples, friction, non-coplanar forces, trusses, and other structures.

Science 433 *Physics—Dynamics*

(2-0) 2 Cr.

Essential elements of dynamics including rectilinear, angular, and harmonic motions; forces producing motion, work, energy, momentum, and power.

SOCIAL SCIENCE

Economics

Peterson

Social Science 201 *General Economics* 3 Cr.

Principles and problems of production, exchange, distribution, and consumption. Comparative economic systems.

Social Science 414 *Labor Problems* 2 Cr.

Background and history of organized labor chiefly in Western industrial societies. Collective bargaining as viewed by labor, management, government, and the public. Combines basic labor economics with the study of the institutions involved in modern labor relations.

Social Science 450 *Managerial Economics* 3 Cr.

Prerequisite: S.S. 201

To provide understanding of price and output theory, market analysis, financial management, and the managerial decision-making process.

I.E. 520 Labor and Industrial Relations is restricted to graduate students. See the *Graduate Studies Bulletin* for course description.

History

Agnew, Melrose

A minor in history consists of 22 semester hours. Required courses are S.S. 101a and b, S.S. 202a and b, and S.S. 410. Additional history courses will be selected.

Social Science 101a *United States History* 3 Cr.

American history to 1865. Political, economic, and social forces which have shaped the nation to the close of the Civil War. Not available to students who have completed S.S. 407.

Social Science 101b *United States History* 3 Cr.

Continuation of S.S. 101a. Not available to students who have completed S.S. 407.

Social Science 202a *Western Civilization* 3 Cr.

Survey of Western civilization along the Nile, the Fertile Crescent, through Greece, Rome, the Middle Ages, the Renaissance, and the Reformation.

Social Science 202b *Western Civilization* 3 Cr.

A survey of Western civilization from the Reformation to the present.

Social Science 301 *Economic History of the United States* 3 Cr.

Economic evolution of the United States since colonial times. Development of economic problems and the foundations of modern industry.

Social Science 405 *Biography of World Leaders* 2 Cr.

Readings in the biographies and autobiographies of American, European, and modern world leaders.

Social Science 407 *History of the Americas* 3 Cr.

History of the United States of America, broadened to include parallel developments of Latin America and Canada.

Social Science 409 *Recent History of the United States* 2 Cr.

American history in the twentieth century. Study of recent world development in which the United States has played a part.

Social Science 410 *Modern World* 3 Cr.

Modern trends in terms of historical backgrounds, providing a frame of reference for interpreting the contemporary world. United Nations.

Social Science 418 *History of Modern Russia* 2 Cr.

Survey of significant developments in Russia since 1815.

Political Science

Melrose, Price

Social Science 311 *Government* 3 Cr.

Functional study of American governmental units. Political principles, processes, problems, and emphasis on constitutional principles; comparative study of selected major foreign governments.

Social Science 417 *American Politics* 3 Cr.

Prerequisite: S.S. 311

Analysis of modern political parties. Nominating methods, campaigns, elections, practical politics in legislative bodies, and machines and bosses.

Sociology

Blaug, Deininger, Rimel, Schesvold

A minor in sociology consists of 22 semester hours. Required courses are S.S. 309, S.S. 411, and S.S. 420. Additional sociology courses will be selected.

Social Science 309 *General Sociology* 3 Cr.

An introduction to the study of human interaction in social groups and the relationships between the individual and the group; a framework for viewing patterns of social behavior.

Social Science 326 *Marriage and the Family* 2 Cr.

A socio-psychological study of the family designed to aid the unmarried as well as the married student. Consideration of major personal and social issues confronting the family today.

Social Science 350 *Social Psychology* 2 Cr.

Prerequisite: S.S. 309

Study of the dynamics of social interaction, the development of the self, and varieties in the processes of social life.

Social Science 411 *Problems of American Society* 2 Cr.

Application of the understandings of sociology to selected social problems. Social expectations and values related to actual behavior. Problems of individuals, groups, and societies.

Social Science 420 *Cultural Anthropology* 3 Cr.

Survey of the field of anthropology emphasizing varieties of culture and cultural behavior; the processes of cultural diffusion and change.

Social Science 430 *Sociology of the Community* 3 Cr.

Prerequisite: S.S. 309

Influences of geography, population characteristics, economy, political structure, and culture on communities; community development and planning.

Social Science 440 *Sociology of Work* 3 Cr.

Study of human behavior in varying types of employment and occupations; values sought and attained in employment; employer-employee role behavior as a social system in relation to personality needs; basic trends in the occupational structure of American society.

Social Science 455 *Sociological Theory* 3 Cr.

Contributions of major social theorists, critically analyzed in terms of their times, concepts, variables, and relationships they propose, their usefulness for research purposes; chief components of contemporary general sociological theory.

Social Science 460 *Juvenile Delinquency* 3 Cr.

Prerequisite: S.S. 309

Definitions and trends of deviant behavior among youth; research findings; efforts toward prevention, control, and treatment.

Social Science 475 *Sociology of Minority Groups* 3 Cr.

Prerequisite: S.S. 309

Social-psychological aspects of the interaction between majority and minority groups; basic statistics about minorities in the United States and research findings.

SPEECH

Cutnaw, Falkofske, Lengfeld, Ziemann

A minor in speech consists of 22 semester hours. Required courses are Sp. 106 and 223. Additional speech courses will be selected. One course in English, either E. 216, E. 348, E. 400a, or E. 400b, may be included.

Speech 106 *Fundamentals of Speech*

2 Cr.

Techniques of effective speech based upon diagnosis of individual needs and training for the improvement of the necessary skills. Emphasis on speaker-listener relations, speech organization, voice, bodily action, language, and the development of confidence and poise.

Speech 110 a-b c-d *Forensics*

1 Cr. per year

Training in speech through participation in intercollegiate forensics, including oral interpretation, oratory, extempore speaking, after-dinner speaking, debate, discussion, and preparation of speech programs.

Speech 223 *Essentials of Public Speaking*

2 Cr.

Prerequisite: Sp. 106

Advanced techniques of speaking. Development of proficiency in audience analysis, speech composition, and delivery of various types of speeches.

Speech 320 *Advanced Speech Activities*

2 Cr.

Prerequisite: Sp. 106

Individual and group activities for developing skill in a variety of speech situations. Projects in analysis and delivery of literature. Special consideration of individual problems.

Speech 322 *Techniques of Group Leadership*

2 Cr.

Prerequisite: Sp. 106

Techniques for presiding at various meetings through use of parliamentary law. Training in the art of persuasion as a means of motivating and guiding the behavior of others.

Speech 325 *Discussion and Debate*

2 Cr.

Prerequisite: Sp. 106

A study of two basic democratic tools. Principles and methods of leading and participating in the symposium, panel, roundtable, and other types of discussion. Practice in debate techniques.

Speech 340 *Contemporary Theatre*

2 Cr.

Prerequisite: Sp. 106

A study of selected plays including structure, dramatic content, and production methods. Field trips to current plays.

Speech 344a *Theatre Workshop*

1 Cr.

Prerequisite: Sp. 106

Practical training in directing, acting, and/or stagecraft through actual participation in the production of the college plays.

Speech 344b *Theatre Workshop*

1 Cr.

Prerequisite: Sp. 344a

A continuation of Sp. 344a. Further training in some phase of play production through practical participation in the college plays.

Speech 406 *Communication Skills for Education Leadership* 2 Cr.

Prerequisite: Sp. 106

Leadership techniques and communication skills for use in the classroom and educational activities; an approach to leadership attitudes and skills of democratic leadership in directing and participating in educational activities and classroom teaching.

Speech 444 *Play Production* 2 Cr.

Prerequisite: Sp. 106

Survey of the art of play production: study of historical backgrounds, styles of production, and acting and directing techniques.

Speech 445 *Stagecraft and Scene Design* 2 Cr.

Prerequisite: Sp. 106

Technical problems in producing plays: techniques in designing the set; constructing, painting, and handling scenery; stage lighting; make-up; costuming; sound and visual effects; and organization of the production staff.

Speech 450 *Introduction to Speech Correction* 2 Cr.

Prerequisite: Sp. 106

Study of the nature, causes, and methods of correcting voice and articulation defects.

Speech 470 *Radio and Television Workshop* 2 Cr.

Prerequisite: Sp. 106

Radio and television station procedures; techniques and methods in planning, directing, and producing programs; participation in actual broadcasts.

Speech 475 *Direction of Speech Activities* 2 Cr.

Prerequisite: Sp. 106

Organization, training, procedures, and judging of speech activities such as the one-act play, original and non-original oratory, extempore speaking and reading, declamation, four-minute speech, and debate.

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Wood Technics Courses, 110-112

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